UNIVERSITÄT
LUZERN

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FÜR AUSLÄNDISCHES ÖFFENTLICHES RECHT
UND VÖLKERRECHT

Legal Opinion

on behalf of Frontiers Media SA

concerning the

Right to Science

written by

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31 August 2022

DOI: 10.5281/zenodo.7778511

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1 Introduction and Assignment

Having access to scientific papers and books is an indispensable prerequisite for doing research and advancing scientific knowledge which, in turn, is key for the fulfilment of human rights such as the rights to food, health and life as well as the economic development of nations. The modern Open Access movement, which came to life with the advent of the internet, is based on the belief that the new technological means would greatly facilitate access to scientific publications around the globe, providing an unprecedented opportunity for scientific progress. Around the turn of the millennium, many believed that the internet would fundamentally alter the way research is being published and disseminated.[1] Proponents of Open Access (in the following OA) started to claim that in the digital era, the free accessibility and reusability of scientific knowledge should become the standard. Peter Suber famously coined the term "access revolution".[2] Some 20 years later, OA has still not become the full reality. However, the Covid-19 pandemic, in which many publishers lifted their paywalls and researchers around the globe resorted to open and collaborative research practices in the race against the virus, has revitalized the debate about OA and has driven home important arguments of OA proponents.

Arguments in favour of OA can now also be drawn from human rights law, and, more concretely, from Art. 15 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) where the so called Right to Science (RtS) is anchored. In its recent General Comment No. 25 on science and economic, social and cultural rights,[3] the Committee on Economic, Social and Cultural Rights (in the following CESCR or Committee) explicitly asks states to promote openness in research and makes clear that OA forms part of Art. 15 ICESCR.[4] Already before, states such as Denmark made a link between the RtS and OA in their state reports.[5]

General Comments represent an authoritative interpretation of the rights enshrined in the ICESCR as well as its sister Covenant, the International Covenant on Civil and Political Rights (ICCPR), offering guidance on the content and scope of the rights for legislation, policy, and practice.[6] Even though the RtS is by no means a new guarantee and already has a place in Art. 27(1) of the Universal Declaration of Human Rights (UDHR) since 1948,[7] it has so far been considered

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1 See Budapest and Berlin Declarations on Open Access.

2 Peter Suber, Open Access (Cambridge, Massachusetts/London, England: The MIT Press 2012), 2.

3 UN Committee on Economic, Social and Cultural Rights (CESCR), *General Comment No. 25: Science and Economic, Social and Cultural Rights (Article 15 (1) (b), (2), (3) and (4) of the International Covenant on Economic, Social and Cultural Rights)*, E/C.12/GC/25 (2020).

4 *Ibid.*

5 Sixth periodic report submitted by Denmark under Articles 16 and 17 of the Covenant, due in 2018, para. 227.

6 Keller and Grover, 'General Comments of the Human Rights Committee and Their Legitimacy', in H. Keller, G. Ulfstein and L. Grover (eds.), *UN Human Rights Treaty Bodies: Law and Legitimacy* (2012), at 128.

7 UN General Assembly, Universal Declaration of Human Rights (UDHR), Res 217 A(III), (A/RES/3/217 A), 10 December 1948, Art. 27(1) UDHR: Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.

the "sleeping beauty"[8] of human rights law. The normative content of the right thus remained relatively unknown, and as a consequence, it has rarely been invoked before quasi-judicial authorities[9], let alone formal courts. Over the last years, however, the RtS has slowly started to gain the attention of the United Nations (UN)[10] and academia[11]. Considering all these aspects, it is thus probable that in the aftermath of the publication of GC No. 25, the RtS will become more relevant in practice in the future.

For the RtS to become a tool to support the OA transition, however, some – legal and practical – hurdles remain. The doctrine of "progressive realization" on which the Covenant on Economic, Social and Cultural Rights is built, as opposed to its sister Covenant, is all too often used by states as a pretext for inaction; furthermore, courts around the globe consider CESCR rights to be "non-justiciable", i.e., lacking the ability to be directly enforced before courts. Finally, some uncertainties also result from the interpretation of the Committee, which remains vague and leaves many questions unanswered.

In order to understand the meaning and scope of the duties of states in relation to OA, a careful analysis of GC No. 25 is therefore necessary. This is what this legal opinion purports to do, taking

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[8] Riedel, 'Sleeping Beauty or Let Sleeping Dogs Lie? The Right of Everyone to Enjoy the Benefits of Scientific Progress and Its Applications (REBSPA)', in H. Hestermeyer and R. Wolfrum (eds.), *Coexistence, Cooperation and Solidarity: Liber Amicorum Rüdiger Wolfrum* vol. I (2012) 503; Schabas, 'Looking Back: How the Founders Considered Science and Progress in Their Relation to Human Rights', 2015 *European Journal of Human Rights* (2015) 504.

[9] Committee on Economic, Social and Cultural Rights (CESCR), *Views Adopted by the Committee under the Optional Protocol to the International Covenant on Economic, Social and Cultural Rights, Concerning Communication No. 22/2017*, E/C.12/65/D/22/2017, 28 March 2019; Tribunal Supremo, *López, Glenda, et al. v. Instituto Venezolano de Los Seguros Sociales (IVSS)*, Sentencia No. 487, 2001.

[10] M. Orellana, *Right to Science in the Context of Toxic Substances - Report of the Special Rapporteur on the Implications for Human Rights of the Environmentally Sound Management and Disposal of Hazardous Substances and Wastes*, A/HRC/48/61 (2021); F. Shaheed, Report of the Special Rapporteur in the Field of Cultural Rights - The Right to Enjoy the Benefits of Scientific Progress and Its Applications, A/HRC/20/26, 14 May 2012; UN Educational, Scientific and Cultural Organisation (UNESCO), *UNESCO Recommendation on Open Science*, SC-PCB-SPP/2021/OS/UROS (2021]; UN Educational, Scientific and Cultural Organisation (UNESCO) and International Council for Science (ICSU), Declaration on Science and the Use of Scientific Knowledge, 30 C/15, 1 July 1999; UN Educational, Scientific and Cultural Organization (UNESCO), *Recommendation on the Status of Scientific Researchers* (1974); *Recommendation on Science and Scientific Researchers*, Doc 39 C/Res 85 (2017]; Venice Statement, 'The Venice Statement on the Right to Enjoy the Benefits of Scientific Progress and Its Applications', (2009).

[11] Besson, 'Science without Borders and the Boundaries of Human Rights : Who Owes the Human Right to Science ?', 2015 *European Journal of Human Rights* (2015) 462; Donders, 'The Right to Enjoy the Benefits of Scientific Progress: In Search of State Obligations in Relation to Health', 14 *Medicine, Health Care and Philosophy* (2011) 371; Donders and Plozza, 'Look Before You Leap - Anticipation Duties and Responsibilities under the Right to Science', *International Journal of Human Rights Law* (forthcoming); R. Kunz, *Opening Access, Closing the Knowledge Gap? The Right to Science and States' Obligations to Regulate the Global Science System in the Digital Age*, SSRN Scholarly Paper, ID 3736938 (2020); Kunz, 'Opening Access, Closing the Knowledge Gap? Analysing GC No. 25 on the Right to Science and Its Implications for the Global Science System in the Digital Age', 81 *Zeitschrift Für Ausländisches Öffentliches Recht Und Völkerrecht / Heidelberg Journal of International Law* (2021] 23; Mazibrada, Plozza and Porsdam Mann, 'Innovating in Unchartered Terrain: Interpretation and Normative Legitimacy of on General Comment on the Right to Science', available at SSRN: https://ssrn.com/abstract=4211453 or http://dx.doi.org/10.2139/ssrn.4211453 ; Plozza, 'Awakening from "Sleeping Beauty's" Slumber', *Völkerrechtsblog* (2021]; 'Evidenzbasierte Politik ist ein Menschenrecht', *Verfassungsblog: On Matters Constitutional* (2021); Porsdam Mann, Donders and Porsdam, '"Sleeping Beauty": The Right to Science as a Global Ethical Discourse', 42 *Human Rights Quarterly* (2020] 332; H. Porsdam and S. Porsdam Mann (eds.), *The Right to Science: Then and Now* (2022]; Schabas, 'Study of the Right to Enjoy the Benefits of Scientific and Technological Progress and Its Applications', in Y. Donders and V. Volodin (eds.), *Human Rights in Education, Science and Culture: Legal Developments and Challenges* (2007); Schabas, *supra* note 8; 'The Right to Enjoy the Benefits of Scientific and Technological Progress and Its Applications', *Human Rights* 33.

the case of Switzerland as a starting point and with the aim of exploring possible legal avenues to advocate OA via the RtS.

In order to understand the legal implications, we will start by briefly situating the RtS within the overall doctrinal framework of the Covenant and introduce the core doctrines relevant in this context. In a next step, we analyse OA as part of the RtS, before moving to the personal scope and within that the questions of who the right holders and duty bearers of the RtS are. Finally, we present different pathways to advocate for OA in light of the RtS via judicial as well as political procedures.

2 Understanding the Right to Science

Put simply, the RtS is an umbrella term under which the states are obliged to:

- recognise the right of everyone to enjoy the benefits of scientific progress and its applications (Art. 15(1)(b) ICESCR)
- recognize the right of everyone to benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author (Art. 15(1)(c) ICESCR)
- conserve, develop and diffuse science (Art. 15(2) ICESCR)
- respect the freedom indispensable for scientific research (Art. 15(3) ICESCR)
- encourage and develop international contacts and cooperation in the scientific field (Art. 15(4) ICESCR).

The RtS thus contains both so-called negative and positive obligations. While the former require states to refrain from interfering with a right, which can usually be directly enforced before a court, the latter oblige states to take positive action. To facilitate the implementation of rights, the Committee began to outline state obligations in a tripartite typology, namely the duties to respect, protect and fulfil. The duty to respect requires as with negative obligations the state to refrain from action, while the duties to protect and fulfil instigate positive action. These are often primarily directed at the legislator and political authorities, rather than courts.

One of the main reasons why the RtS remains understudied and overlooked is the assumption that many rights enshrined in the Covenant on economic, social and cultural rights are non-justiciable. In other words, they lack "[…] the ability to claim a remedy before an independent and impartial body when a violation of a right has occurred or is likely to occur."[12] In 1990, the Committee cautiously began to approach the question of justiciability. The Committee derived from Art. 2 (1) ICESCR that the duty to undertake steps to progressively achieve the full realization of the Covenant rights by all appropriate means not only entails legislation. Under appropriateness, the Committee also considers the provision of judicial or other effective remedies for rights which

[12] C. Courtis and International Commission of Jurists, *Courts and the Legal Enforcement of Economic, Social and Cultural Rights: Comparative Experiences of Justiciability* (2008), at 6.

are justiciable.[13] In 1998, the Committee revisited the question of justiciability. The Committee stated that the differentiation between economic, social and cultural (ESC) and civil and political (CCP) rights cannot be justified, since there is no right in the ICESCR which could not "be considered to possess at least some significant justiciable dimensions".[14] With regards to the RtS, the Committee affirmed the justiciable nature:

> "States parties should establish effective mechanisms and institutions, where they do not already exist, to prevent violations of the right and to ensure effective judicial, administrative and other remedies for victims if such violations occur. As this right can be threatened or violated not only by actions of the State but also through omissions, remedies must be effective in both cases."

The invidious position of ESC-rights due to their assumed lack of justiciability goes hand in hand with the fact that these rights are subject to "progressive realization" (Art. 2(1) ICESCR). This limitation is to be seen in light of the fact that a number of states are unable to put all ESC-rights into immediate effect due to resource constraints. The rights enshrined in the ICESCR – as opposed to those in the sister Covenant on CCP-rights – were thus traditionally viewed as merely aspirational goals that need to be realized progressively by the states, usually through legislation. However, the Committee has made it clear that despite some leeway for states implementation must not be put off for long.[15]

Over the course of the years, the Committee has developed a refined reading of the rights enshrined in the Covenant and established the doctrine of minimum core obligations and the prohibition of retrogressive measures. Both doctrines impose a duty on the state to immediately implement certain elements of a right.

2.1 Minimum Core Doctrine

As an obligation that trumps progressive realization the Committee has developed – via treaty interpretation – the minimum core doctrine.[16] Therefore, the rights of the ICESCR also include immediate state obligations, alongside the obligation to not adopt retrogressive measures – irrespective of the level of resources available to a state.[17] The immediate realization of obligations in relation to the rights in the ICESCR are defined as minimum core obligations.

Minimum core obligations represent the minimum standard that must be implemented, otherwise, the right would lose its raison d'être. If a state does not take action to meet the ends of the minimum requirements, the presumption remains that it violated its legal obligations under the

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13 UN Committee on Economic, Social and Cultural Rights (CESCR), *General Comment No. 3: The Nature of States Parties' Obligations (Art. 2, Para. 1, of the Covenant)*, E/1991/23 (1990), at 5.

14 UN Committee on Economic, Social and Cultural Rights (CESCR), *Draft General Comment No. 9, The Domestic Application of the Covenant*, E/C.12/1998/24 (1998), available at https://digitallibrary.un.org/record/1490423 (last visited 24 July 2022], at 10.

15 UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 13, at 2 and 9.

16 For a general overview, see also the studies: *Minimum Core Obligations of Socio-Economic Rights*, World Bank.

17 UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 13.

ICESCR. This presumption is particularly challenging to rebut for industrialized countries, other states have to prove the contrary:

> "A State claiming that it is unable to carry out its obligation for reasons beyond its control therefore has the burden of proving that this is the case and that it has unsuccessfully sought to obtain international support to ensure the availability and accessibility."[18]

The Committee reiterated the minimum core doctrine in GC No. 25 on science:

> "States parties have to implement, as a matter of priority, core obligations. If a State party fails to satisfy these core obligations, it must demonstrate that it has made every reasonable effort to comply with them, taking into account the totality of the rights enshrined in the Covenant, and in the context of the maximum of its available resources, individually and through international assistance and cooperation."[19]

2.2 Prohibition of Retrogressive Measures

Alongside the duty of states to progressively realize the obligations under the ICESCR and the duty to implement the core obligations of rights immediately goes the prohibition of retrogressive measures (or non-retrogression). The doctrine of non-retrogression was developed by the Committee to hold states accountable if they take steps backwards in human rights protection. However, the doctrine is still in its infancy, as it remains understudied and underused. The question of whether the doctrine only applies to retrogressive measures or also retrogressive effects, i.e., "de facto, empirical backsliding in the effective enjoyment of rights"[20] has not been addressed explicitly by the Committee.[21]

3 Open Access as Part of the Right to Science

From the perspective of OA and the academic publication system, several aspects of GC No. 25 are noteworthy. First of all, the Committee makes it clear that access to knowledge as such forms part of the RtS, and not only access to the fruit of research/concrete scientific applications. By this token, it states that "(…) science provides benefits through the development and dissemination of the knowledge itself." It furthermore highlights the importance of science "in forming critical and responsible citizens".[22]

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[18] UN Committee on Economic, Social and Cultural Rights (CESCR), *General Comment No. 12: The Right to Adequate Food (Art. 11 of the Covenant)*, E/C.12/1999/5 (1999) 9, at 17.

[19] UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 3, at 51.

[20] Nolan, Lusiani and Courtis, 'Two Steps Forward, No Steps Back? Evolving Criteria on the Prohibition of Retrogression Ineconomic and Social Rights', in *Economic and Social Rights after the Global Financial Crisis* (2014) 121 , at 123.

[21] Warwick, 'Unwinding Retrogression: Examining the Practice of the Committee on Economic, Social and Cultural Rights', 19 *Human Rights Law Review* (2019) 467, at 471.

[22] *Ibid*., at 8.

The Committee then identifies as an element of the RtS that "(…) States should promote open science and open source publication of research. Research findings and research data funded by States should be accessible to the public."[23] It makes clear that "States must exert every effort to ensure equitable and open access to scientific literature, data and content, including by removing barriers to publishing, sharing and archiving scientific outputs." [24] On the other hand, it highlights the important role of other actors in this regard:

> "However, open science cannot be achieved by the State alone. It is a common endeavour to which all other stakeholders should contribute, nationally and internationally, including scientists, universities, publishers, scientific associations, funding agencies, libraries, the media and non-governmental institutions. All these stakeholders play a decisive role in the dissemination of knowledge, especially when it comes to outcomes of research financed with public funds." [25]

Most of the considerations of the Committee concerning OA are listed under the heading "obligation to fulfil", which clearly is the most relevant dimension of the RtS in this context. However, as becomes clear throughout the GC, also the other dimensions of the right play a role. In the following, given the primary role of duty to fulfil, we will start examining this dimension before turning to the duties to respect and protect.

3.1 Obligation to Fulfil: the Requirement to Promote OA

Given the nature of science, which contains a strong infrastructural and organizational dimension, the obligation to fulfil is particularly relevant in this context. In the words of the Committee, "(t)he obligation to fulfil is particularly important in creating and guaranteeing access to the benefits of the applications of scientific progress."[26] This already becomes clear from the second paragraph of the RtS, which, asking states to take steps "for the conservation, the development and the diffusion of science", contains a "reinforced and specified" duty to fulfil.[27] GC No. 25 now further clarifies the meaning of this provision. It stresses that the *availability* of the RtS requires that these steps need to be taken in a way that "scientific progress is actually taking place, and that scientific knowledge and its applications are protected and widely disseminated."[28] This suggests that it is not sufficient for states to simply promote science – rather, under the RtS, they have the responsibility that science actually advances. One could thus say that the obligation to fulfil requires states to create an environment that allows science to unfold and flourish.

As one of the means to do so, the Committee identifies, in the already cited statement, the support of open ways of publishing.[29] Indeed, one of the core arguments in favour of open practices in

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[23] *Ibid.*, at 16.
[24] *Ibid.*, at 49.
[25] *Ibid.*
[26] *Ibid.*, at 47.
[27] *Ibid*, at 46.
[28] *Ibid.*, 16.
[29] *Ibid.*, at 16.

science is that it drives scientific progress. “Closed” practices in the scientific publishing system, such as paywalls to access journal articles or the prohibition to mine text and data (text and data mining, TDM) for computer-generated analysis, are said to slow down scientific progress and thus touch upon the availability of the RtS.[30] As is furthermore well-known, despite long-lasting efforts both at national and international levels, OA today is still not the reality. In Switzerland, only around one-third of all scientific publications are published under an OA scheme.[31]

This raises the question whether Switzerland could be held responsible for violating its obligation to fulfil the RtS in relation to OA. One of the problems in determining a violation of this dimension of the right, however, is that the obligation to fulfil is subject to progressive realization, leaving states some leeway in its implementation.[32] “Measuring” a violation of the obligation to promote OA as part of the obligation to fulfil is thus not a straightforward matter. Yet, as already mentioned, the Committee has made it clear that also in relation to the RtS, certain obligations need to be realized immediately.[33] This is true for obligations in relation to the minimum core of each right (a) as well as the prohibition of retrogressive measures (b) which could thus open the door for a possible legal claim.

a. The Minimum Core of the Obligation to Promote OA

In GC No. 25, the Committee outlines the minimum core obligations states have in relation to the RtS. Relevant in the present context is, among others, the obligation to “(…) adopt and implement a participatory national strategy or action plan for the realization of this right that includes a strategy for the conservation, the development and the diffusion of science (…).”[34]

This obligation clearly is an obligation of conduct, which means that states are merely obliged to act, rather than reach a particular result. In other words, the Committee does not require states to make OA the standard, let alone to make it mandatory via legislation. Rather, it demands states to develop a strategy or action plan.

In Switzerland, since 2017 a national strategy for Open Access, commissioned by the State Secretariat for Education, Research and Innovation and developed by the consortium swissuniversities with the support of the Swiss National Science Foundation, is in place,[35] further bolstered in 2018 by an Action Plan detailing the steps to be taken.[36] The stated vision is that by 2024 100%

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30 For an overview on the practice of Elsevier see e.g. https://sparcopen.org/our-work/developments-in-tdm-policy/ (last accessed 19 August 2022).

31 See swissuniversities, Action Plan Open Acccess, adopted on 8 February 2018, available on https://www.swissuniversities.ch/fileadmin/swissuniversities/Dokumente/Hochschulpolitik/Open_Access/Plan_d_action-d.pdf (in German and French), at 3.

32 See above, 2.

33 See above, 2.

34 UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 3, at 52.

35 See the National Strategy and Implementation Plan: Open Access the future-oriented publication culture in Switzerland and internationally, https://www.swissuniversities.ch/en/topics/digitalisation/open-access/national-strategy-and-implementation-plan

36 Action Plan, adopted on 8 February 2018, available on https://www.swissuniversities.ch/fileadmin/swissuniversities/Dokumente/Hochschulpolitik/Open_Access/Plan_d_action-d.pdf (in German and French).

of scientific publications originating from public funding is available OA (Article 4 of the strategy). The Swiss strategy encompasses different “action items” (Art. 5), including the adoption of OA policies at higher education institutions and the alignment of existing policies; pooling of resources, awareness raising, national monitoring and supportive regulatory changes. The latter concern the “green road”; according to the Action Plan, the aim is to establish the legal conditions for a so-called secondary publication right or, in other words, to make sure authors and universities are allowed to republish the original publication in a repository after an embargo period.[37]

Furthermore, so-called “read and publish” negotiations with publishers are foreseen as “a necessary transitional measure”. This means that the Consortium of Swiss Academic Libraries in implementing the strategy concludes agreements with academic publishers which includes immediate OA (so-called gold OA) for reading and publishing. The main pillar are so-called “big deal” negotiations with three big publishes, namely Elsevier, Springer Nature and Wiley.[38] Currently, there are also a number of further agreements in place, and the details of the contractual terms are available online.[39] However, explicitly acknowledging the criticism especially “big deal” agreements regularly receive, the strategy paper recognizes that “(…) offsetting agreements strengthen the position of large publishers by extending their role into the world of OA (…)”.[40] In addition to these agreements, the strategy thus also includes the support of the green model (archiving under OA terms of already published research after an embargo period) as well as alternative forms of publishing “(…) that make science more independent from oligopoly systems.”[41] In other words, the strategy follows a *mixed* model (combining different OA models).

Overall, it can thus be said that Switzerland has an encompassing OA strategy. Even though the Swiss strategy certainly leaves some questions unanswered, given the Committee’s rather low threshold it is unlikely that Switzerland would be held responsible for not fulfilling its obligations in this regard. With the regulatory changes envisaged to put OA in practice, Switzerland arguably even goes beyond what the RtS currently demands. However, what should be monitored is the further implementation of the OA strategy and possible adjustments. Should Switzerland make budgetary cuts, for example, this could constitute a prohibited retrogressive measure, as further discussed in the next section.

Given the obligation to develop a strategy for the conservation, the development and the diffusion of science, states not having an OA strategy in place arguably could be in violation of the RtS. This could, for example, be the case for Germany. Instead of a national document addressing OA in an encompassing way, the German position currently is to focus on agreements with the largest

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[37] See Action Plan, No. 5.6.

[38] For an overview of the status see https://www.swissuniversities.ch/themen/digitalisierung/open-access/verlagsverhandlungen (last visited 18 August 2022).

[39] For an overview see https://consortium.ch/vertraege-konditionen/?lang=en (last visited 18 August 2022).

[40] At No. 2 of Art. 5.

[41] No. 4 of Art. 5.

commercial publishers (so-called Project DEAL).[42] In light of the criticism these "big deals" receive, arguably further perpetuating the position of the already powerful and often criticized big publishers, as also mentioned in the Swiss strategy,[43] the argument could be made that this does not satisfy the requirements of the RtS as spelled out by the Committee.

b. Falling behind Technological Progress as Retrogression?

A further obligation states immediately have is to refrain from measures that would mean a step backwards in the realization of the RtS.[44] Looking at the realities in the publishing system with paywalls still dominating the landscape, it becomes clear that the technological opportunities are not fully being exploited. Do states thus fall behind technological progress and thereby violate the prohibition of retrogression? One of the core arguments in favour of OA indeed is that given the nature of science, which benefits from wide diffusion in order to enable others to further build on and develop existing knowledge, accessibility drives progress and innovation. In other words, the communicative potentials of the internet should be used, and OA publishing thus is the adequate form of publishing in the digital era.

However, the Committee in its practice so far has focused on formal state legislation and policies that take a step back in progress already achieved, and not on *de facto* stagnation or backsliding in human rights protection. The same is true for GC No. 25, in which the Committee addresses as examples of prohibited retrogressive measures the removal of programmes or policies to promote science or the erection of barriers to education and information.[45] This suggests that the prohibited acts only cover retrogressive measures, but not retrogressive effects.[46]

It is regrettable that retrogressive effects were not addressed in General Comment No. 25, although the Committee outlined that states should ensure that "scientific progress is actually taking place".[47] OA is now viewed as the standard in the digital age by the scientific community and the implementation and promotion of OA policies should not be a problem for industrialized states. The mere inaction of a high-income state to progressively realize the implementation and promotion of OA represents a retrogressive effect which goes against the very idea of progressive realization. Therefore, the mere inaction to foster OA-policies should be viewed as a violation of the principle of non-retrogression under the RtS.

3.2 Obligations to Respect and to Protect: Regulating the Publishing System

There is a large consensus today that existing intellectual property (IP) regimes – in the case of academic publishing copyright legislation – are among the core reasons why the transition to OA only proceeds slowly. Copyright legislation, providing the legal basis to restrict access to

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[42] For an overview see https://www.projekt-deal.de/about-deal/ last visited 18 August 2022).

[43] Fn. 40.

[44] See on the doctrine in more detail above, 2.2.

[45] UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 3, at 24; see in more detail above, 2.2.

[46] See on the distinction in more detail above, 2.2.

[47] UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 3, at 16.

academic content, remains an important part of the business model of academic publishers, fearing to lose a significant source of revenue if the free accessibility of content via the internet becomes the norm. Especially the big publishers, however, have come under increasing pressure because of the very high subscription fees to academic journals, which put even the budgets of universities and libraries in industrialized countries under serious strain and ultimately culminated in the famous "serials crisis".[48] Since the advent of the digital era, experts furthermore observe a market concentration in the global publishing industry, with a handful of powerful players, such as Elsevier, Wiley and Springer accounting for the majority of all academic publications.[49] With digital publishing making the discrepancy between actual costs and profits even more visible,[50] the OA movement increasingly campaigned not only for more access but also against the predatory practices of some publishers.

GC No. 25 dedicates several paragraphs to "private scientific research and intellectual property protection".[51] "Closed" practices certainly build obstacles to the (economic) *accessibility* of science. This brings to the fore the close connection between science production and global inequalities. Throughout the GC No. 25, the Committee stresses the "deep international disparities"[52] with regard to the enjoyment of the RtS and the immediate obligation of states to eliminate all forms of discrimination.[53] The Committee highlights the link between poverty, inequality and science and stresses the need to tackle the "vicious circle between substantive inequality and unequal access to the right to participate in and to enjoy the benefits of scientific progress and its applications".[54] Explicitly recognizing the borderless nature of science and its primordial role in closing the global knowledge gap, as part of their international obligations in relation to the RtS (Art. 15(4)), the Committee stresses that "States need to take steps (…) to promote an enabling global environment for the advancement of science and the enjoyment of the benefits of its applications."[55] Finally, the Committee makes clear that as part of their minimum core obligations states are obliged to "eliminate laws, policies and practices that unjustifiably limit access by individuals or particular groups to facilities, services, goods and information related to science, scientific knowledge and its applications."[56]

This raises two sets of questions: Firstly, whether copyright legislation enabling closed practices and high fees to access scientific publications violate the RtS (obligation to respect). Secondly,

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[48] See Judith M. Panitch and Sarah Michalak, 'The Serials Crisis. A White Paper for the UNC-Chapel Hill Scholarly Communications Convocation', January 2005, available at <https://ils.unc.edu>.

[49] Vincent Larivière, Stefanie Haustein and Philippe Mongeon, 'The Oligopoly of Academic Publishers in the Digital Era', PLoS ONE 10 (2015).

[50] Richard Van Noorden, 'Open Access: The True Cost of Science Publishing. Cheap Open Access Journals Raise Questions About the Value Publishers add for Their Money', Nature 495 (2013), 426-429 (427).

[51] UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 3, at 58-62.

[52] *Ibid*., at 79.

[53] See in more detail above, 2.3.

[54] UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 3, at 37.

[55] *Ibid.*, at 77.

[56] *Ibid*., at 52.

whether states are obliged to step in and prevent certain practices by the big publishers that arguably hinder equal access to science (obligation to protect).

c. Compatibility of Copyright Legal Regimes with the RtS?

IP rights and the RtS certainly are in tension. To some extent, this tension is reflected in Art. 15 ICESCR itself, which in lit. c enshrines the right of everyone “to benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.” Yet, the Committee has highlighted in a previous GC that this provision does not elevate IP rights to the status of human rights. It stated: “In contrast to human rights, intellectual property rights are generally of a temporary nature, and can be revoked, licensed or assigned to someone else. While under most intellectual property systems, intellectual property rights, often with the exception of moral rights, may be allocated, limited in time and scope, traded, amended and even forfeited, human rights are timeless expressions of fundamental entitlements of the human person.”[57] GC No. 25 now addresses IP regimes specifically from the perspective of the RtS, recognizing that “(…) intellectual property can negatively affect the advancement of science and access to its benefits (…).”[58] The Committee furthermore explicitly acknowledges that “(…) the excessive price of some scientific publications is an obstacle for low-income researchers, especially in developing countries.”[59] However, it is important to note that the Committee neither states that IP regimes are per se incompatible with the RtS, nor that states need to undertake reforms of their legal systems in a way that OA is ensured. Rather, it refers to the complex relationship between IP regulation and human rights law, also stressing the financial incentives created through IP regimes that are said to stifle innovation – and thus ultimately support human rights such as the right to health.[60]

However, the Committee does indicate certain limits. By this token, it highlights that ultimately, IP law has a social function, a stance it already in its General Comment No. 17 in 2006[61] and now reiterated in GC No. 25:

> “(…) intellectual property is a social product and has a social function and consequently, States parties have a duty to prevent unreasonably high costs for access to essential medicines, plant seeds or other means of food production, or for schoolbooks and learning materials, from undermining the rights of large segments of the population to health, food and education.”[62]

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[57] UN Committee on Economic, Social and Cultural Rights (CESCR), *General Comment No. 17: The Right of Everyone to Benefit from the Protection of the Moral and Material Interests Resulting from Any Scientific, Literary or Artistic Production of Which He or She Is the Author (Article 15, Paragraph 1 (c), of the Covenant)*, E/C.12/GC/17 (2006), at 2.

[58] *Ibid*., at 60.

[59] *Ibid*., at 61.

[60] *Ibid*., at 61.

[61] UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 62, at 35.

[62] UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 3, at 62.

In other words, a balance must be found between IP protection and access. The GC No. 25 highlights that

> "A balance must be reached between intellectual property and the open access and sharing of scientific knowledge and its applications, especially those linked to the realization of other economic, social and cultural rights, such as the rights to health, education and food."[63]

Concretely, states should take measures "to foster the positive effects of intellectual property on the RtS, while at the same time avoiding its possible negative impacts (.)" and "to guarantee the social dimensions of intellectual property".[64] How exactly the balance between IP protection and access should be reached, however, is not addressed in more detail and leaves ample room for interpretation.

The Committee thus certainly goes less far than the UN Special Rapporteur in the Field of Cultural Rights.[65] In her report, the Special Rapporteur "(…) emphasizes human knowledge as a global public good and recommends that States should guard against promoting the privatization of knowledge to an extent that deprives individuals of opportunities to take part in cultural life and enjoy the fruits of scientific progress."[66] The report goes on by analysing the role of corporate rights holders regarding copyright and clarifies that: "From the human rights perspective, copyright policy and industry practices must be judged by how well they serve the interests of human authors, as well as the public's interest in cultural participation."[67] The report then dedicates an entire chapter to the promotion of cultural participation through open licensing and emphasizes the importance of access to scientific publications for the scientific process itself.[68] It concludes by recommending states to inter alia:

> "(…) complete a human rights impact assessment of their domestic copyright law and policy, utilizing the right to science and culture as a guiding principle. (…) National courts and administrative bodies should interpret national copyright rules consistently with human rights standards, including the right to science and culture. Copyright laws should place no limitations upon the right to science and culture, unless the State can demonstrate that the limitation pursues a legitimate aim, is compatible with the nature of this right and is strictly necessary for the promotion of general welfare in a democratic society (art. 4 of the International Covenant on Economic, Social and Cultural Rights)."[69]

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63 *Ibid.*

64 Ibid., at 62.

65 F. Shaheed, Report of the Special Rapporteur in the Field of Cultural Rights - Copyright Policy and the Right to Science and Culture, A/HRC/28/57, 24 December 2014.

66 *Ibid.*, at 14.

67 *Ibid.*, at 41.

68 *Ibid.*, at 77 ff.

69 *Ibid.*, at 96–98.

However, a further limitation on IP regimes might be derived from the obligation spelled out in the general part of the GC, according to which as part of their core obligations, states need to eliminate laws that *unjustifiably limit access to science*.[70] In light of the developments of the last years, one could argue that the justification for exclusive copyrights in publicly funded research does not hold anymore and that, as a consequence, certain regimes might constitute such an "unjustifiable limitation".[71] While this argument cannot be fully developed here, some general thoughts are in order. The GC itself does not define the term "unjustifiable limitation". It is submitted here that to clarify the meaning, it makes sense to refer to the object and purpose of a given piece of legislation. With regard to copyright law, an important justification for the restriction of usage of content historically was of economic nature. More concretely, the idea was that the possibility to exclude others would incentivize authors to create and publishers to bear the costs (and risks) of publishing the work.[72] Today, by contrast, copyright legislation is in a legitimacy crisis.[73] In publicly funded research, authors do not depend on income generated through publishing, and a number of open licenses such as Creative Commons licences exist to protect their moral rights. When it comes to publishers, today a number of well-established OA business models exist. This is especially the case for the so-called gold model under which the costs – or revenues – are shifted from the reader to the author via so-called Article Processing Charges ("pay to publish"). While this model is itself not devoid of criticism – especially concerning the often exorbitantly high prices of APCs[74] –, it is out of question that the gold model, which operates with open licenses, is a successful business model.[75] This thus seriously puts into doubt whether access restrictions enabled by copyright legislation are still justifiable, even more so in light of the important countervailing public interests.

Alternatively, the argument could be made that the RtS at least requires that legislation is designed in a way that OA is effectively made possible.[76] One of the problems of the current legal situation in Switzerland is that it allows the transfer of rights to publishers. Since these often have a stronger negotiation position, in practice authors often do not oppose the transfer of their rights, and as a result – depending on the terms of the contract – they might be prevented from using

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[70] UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 3, at 52; see *supra* note 56 for full citation.

[71] On the question whether copyright law in the digital era still provides added value see also recently Klaus D. Beiter, Reforming Copyright or Toward another Science? A more Human Rights-Oriented Approach under the REBSPA in Constructing a 'Right to Research' for Scholarly Publishing, forthcoming in Brooklyn Journal of International Law 48 (2023), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4196341.

[72] See Gerd Hansen, Warum Urheberrecht?: Die Rechtfertigung des Urheberrechts unter besonderer Berücksichtigung des Nutzerschutzes (Baden-Baden: Nomos 2009), 7-39.

[73] Ibid., 40-80.

[74] See Shaun Yon-Seng Khoo, Article Processing Charge Hyperinflation and Price Insensitivity: An Open Access Sequel to the Serials Crisis, *Liber Quarterly* 29 (2019).

[75] See for the latest numbers Walt Crawford, Gold Open Access 2016-2021. Articles in Journals (GOA7) (Livermore, California: Cites & Insights Books 2022), available at https://waltcrawford.name/goa7.pdf (last accessed 14 September 2022).

[76] https://sui-generis.ch/article/view/sg.46/647#_ftnref114, at para 21; https://www.horizonte-magazin.ch/2018/03/08/das-neue-urheberrecht-bremst-open-access/.

the green road and to republish their work in a repository.[77] It has therefore been deplored that so-called secondary publication rights for (partially) publicly funded research have not been included in the copyright act reform,[78] in contrast to the legal situation in Germany under §38(4) of the Copyright Act.[79] A secondary publication right would grant authors the right to republish their work after an embargo period (one year in Germany) irrespective of the terms of the contract with a publisher. By this token, the Swiss Action Plan states that "full exploitation of the potential is only possible if the author or the university has an obligatory secondary publication right."[80]

It could be argued that such a limitation/exception would advance the idea of open access without unreasonably prejudicing the interests of authors. If it is conceptualized as a possibility and not as a duty, a possible conflict with the freedom of researchers to decide about the publication modalities as protected by scientific freedom can be excluded. Such a conflict is invoked by members of the University of Konstanz in a case currently pending before the German Constitutional Court.[81] However, even if framed as an obligation, it is not clear whether an obligation to make use of the secondary publication right would indeed violate scientific freedom. Rather, good arguments suggest that the interference with the right is justified by countervailing constitutional interests, especially the interest in an overall functioning science system as protected under the "objective" dimension of scientific freedom.[82] In the particular case of the University of Konstanz, the infringement of the individual academics' rights furthermore seems rather minor, since the regulation in question only concerns the so-called "secondary" publication in a repository (green OA) and does not touch upon the original decision where to publish. The burden of justification for the infringement is thus lower.

To conclude, while the Committee did not explicitly address the question of whether access restrictions enabled by copyright legislation still pursue sufficiently legitimate aims in the digital era

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77 See for an encompassing analysis of the legal situation (before the copyright law reform) Reto M. Hilty & Matthias Seemann, Open Access – Access to scientific publications in Swiss Law, Expert Opinion Commissioned by the University of Zurich, available at https://www.zora.uzh.ch/id/eprint/30945/5/Open_Access_Gutachten_2010_07_17-E-def.pdf (last accessed 13 September 2022).

78 See Michael Baumann, Das neue Urheberrecht bremst Open Access, Horizonte – das Schweizer Forschungsmagazin, 8 March 2018, available at https://www.horizonte-magazin.ch/2018/03/08/das-neue-urheberrecht-bremst-open-access/ (last accessed 13 September 2022); see also the statement by Florent Thouvenin and Daniel Hürlimann, Revision des Urheberrechts: Wissenschaftsschranke und Zweitveröffentlichungsrecht, 31 March 2016, available at https://www.huerlimann.com/pdf/itsl_vernehmlassung-urg.pdf (last accessed 13 September 2022); for further reform proposals see Hilty & Seeman (n. 78), 86 ff., as well as Swiss OA Action plan, at 16.

79 Art. 38(4) Urheberrechtsgesetz from 9 September 1965, BGBl. I 1273 (unofficial translation): "The author of a scientific contribution which results from research activities at least half of which were financed by public funds and which was reprinted in a collection which is published periodically at least twice per year also has the right, if he or she has granted the publisher or editor an exclusive right of use, to make the contribution available to the public upon expiry of 12 months after first publication in the accepted manuscript version, unless this serves a commercial purpose. The source of the first publication must be cited. Any deviating agreement to the detriment of the author is ineffective."

80 Aktionsplan, p. 16 (unter 5.6.).

81 The administrative court (Verwaltungsgerichtshof) Baden-Württemberg decided on 26 September 2017 to suspend the proceeding and ask the Constitutional court for a preliminary ruling. See VGH Baden-Württemberg, Decision of 26 September 2017, 9 S 2056/16. The question before the Constitutional Court now, however, relates to the powers to adopt said regulation rather than to scientific freedom.

82 See also Nikolas Eisentraut, 'Die Digitalisierung von Forschung und Lehre – auf dem Weg in eine "öffentliche" Rechtswissenschaft?', Ordnung der Wissenschaft 3 (2020), 177-190, at 186.

and in the face of important countervailing rights and interests, based on the considerations of GC No. 25 the argument can be made that a human rights friendly interpretation requires as a minimum that copyright legislation effectively enables OA policies.

d. Regulating Predatory Practices by Publishers?

Besides copyright legislation, there is broad agreement that other structural issues in relation to the publishing system provide obstacles to equal access to science. By way of example, as mentioned above, since several years experts observe a market concentration in the publishing sector, driving prices further up.[83] More recently, furthermore, new practices by publishers have attracted criticism, such as the increasing use of tools to track user data,[84] and excessive APCs, which risk to simply shift the access problem from readers to authors and to create new exclusions, especially for authors from the Global South.[85] Indeed, studies suggest that hyperinflation in the publishing industry remains a problem and that we might be witnessing “an open access sequel to the serials crisis”.[86]

This raises the question whether states have the obligation to step in and prevent publishers from interfering with the RtS. Regrettably, the Committee did not explicitly address this question. GC No. 25 overall focuses on the question of access to knowledge and its concrete applications and less on the production of knowledge. While one could argue that the obligation to immediately eliminate laws, policies and practices limiting access to knowledge in an unjustifiable way[87] applies to this situation, the Committee gives no clear answers and thus provides little guidance for states despite the increasing practical relevance of these questions.

4 The Personal Scope of the Right to Science

4.1 Who are the Duty Bearers?

The RtS is – since it is a human right – primarily enforceable vis-à-vis the state. The general provision is outlined in Art. 2 (1) ICESCR, according to which the state has to

> “(…) take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the

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[83] See *supra*, 3.2.

[84] See e.g. Scholarly Publishing and Academic Resources Coalition (SPARC), Landscape Analysis: The Changing Academic Publishing Industry – Implications for Academic Institutions, 28 March 2019, available at https://doi.org/10.31229/osf.io/58yhb.

[85] Smith, Audrey C.; Merz, Leandra; Borden, Jesse B.; Gulick, Chris K.; Kshirsagar, Akhil R. & Bruna, Emilio M.; Assessing the effect of article processing charges on the geographic diversity of authors using Elsevier’s “Mirror Journal” system, Quantitative Science Studies 4(2021), 1123-1143; Powell, Andrea; Johnson, Rob & Herbert, Rachel; Achieving an Equitable Transition to Open Access for Researchers in Lower and Middle-Income Countries, White Paper, International Center for the Study of Research, July 2020.

[86] See for an analysis of APC pricing Shaun Yon-Seng Khoo, Article Processing Charge Hyperinflation and Price Insensitivity: An Open Access Sequel to the Serials Crisis, *Liber Quarterly* 29 (2019), 1-18.

[87] UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 3, at 52.

> rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures."

The question of who exactly forms part of the state is described only in cursory terms in the ICESCR.[88] Therefore, the answer may be inferred from the rules of international law governing state responsibility, the Draft Articles on State Responsibility (DASR).[89] According to DASR, any breach of international law is inter alia attributable to the state if it results from the conduct of any state organ, whether legislative, executive or judicial, whatever position it holds in the organization of the state and whatever character as an organ is attributable to the state (Art. 4(1) DASR). The state may also empower private persons by the law of the state to exercise elements of governmental authority. As a consequence, the conduct of a private person, which does not represent an organ of the state according to the definition outlined above may nonetheless trigger state responsibility (Art. 5 DASR). Moreover, the state is responsible for its so-called de facto organs, which are a person or a group of persons who act under the instruction, direction or control of the state (Art. 8 DASR). Finally, it follows from the above that the State is not responsible for private acts which do not fall into these categories.

Yet, not all human rights violations are committed by the state, but by private economic actors. In general, private economic actors are not bound by human rights obligations, which is why it is – to this date – difficult to hold these actors accountable for infringements on human rights. In 2011, the Human Rights Council endorsed the Guiding Principles on Business and Human Rights (so-called Ruggie Principles).[90] The Ruggie Principles represent a soft law instrument which emphasizes the obligation a state has towards infringements of human rights by private economic actors.

In 2017, the Committee published its General Comment No. 24 on State obligations under the International Covenant on Economic, Social and Cultural Rights in the context of business activities. Regarding the duty to protect, the Committee referred to the Ruggie Principles and stated that:

> "The obligation to protect entails a positive duty to adopt a legal framework requiring business entities to exercise human rights due diligence in order to identify, prevent and mitigate the risks of violations of Covenant rights, to avoid such rights being abused, and to account for the negative impacts caused or contributed to by their decisions and operations and those of entities they control on the enjoyment of Covenant rights. States should adopt measures such as imposing due diligence requirements to prevent abuses of

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[88] Art. 28 ICESCR stipulates that the provisions of the present Covenant shall extend to all parts of federal States without any limitations or exceptions.

[89] International Law Commission (ILC), Draft Articles on Responsibility of States for Internationally Wrongful Acts (DASR), vol. Supplement No. 10 (A/56/10), chp.IV.E.1, 2001.

[90] UN General Assembly, Human Rights and Transnational Corporations and Other Business Enterprises, A/HRC/RES/17/4, 6 July 2011.

> Covenant rights in a business entity's supply chain and by subcontractors, suppliers, franchisees, or other business partners."[91]

However, the challenge in human rights law lies in the protection of individuals against non-state actors, especially private economic actors. This is particularly difficult when it comes to OA since the actors holding up barriers and requiring Article Processing Charges etc. (see above) are private publishers.

4.2 Who are the Right Holders?

Elements of the RtS can be claimed by any individual, group of individuals or institutions[92]. When it comes to traditional knowledge General Comment No. 25 even acknowledges a collective dimension[93] of possible right holders. However, the question of the collective dimension of human rights is difficult and highly debated in academia. Lastly, although human rights might also protect legal entities – if so determined by the treaty or the subject and purpose of the right – there is no indication that the RtS may also protect legal entities.

5 Advocating Open Access via the Right to Science

In order to advocate OA on the basis of the RtS, various pathways for advocacy will be introduced. On the one hand, judicial pathways on the national and international levels will be demonstrated.[94] The analysis starts with complaints on the national level to the Swiss Federal Supreme Court and then moves to UN-level. A complaint before the European Court of Human Rights on the basis of the RtS is not possible since there is no legal basis in the European Convention on Human Rights. On the other hand, political pathways on the international level are presented to advocate for OA in the framework of international institutions.

5.1 Complaints to the Federal Supreme Court of Switzerland

Switzerland ratified the ICSECR in 1992. Yet, the Federal Supreme Court of Switzerland takes the view that the rights protected in the ICESCR are not directly applicable in Switzerland and therefore lack justiciability. According to the Court, ESC-rights represent mandates to the legislator. As a consequence, ESC-rights cannot be invoked before the Federal Supreme Court.

> "Das Bundesgericht hat die direkte Anwendbarkeit dieser Bestimmung bei früherer Gelegenheit verneint und festgehalten, aus ihr lasse sich kein individualrechtlicher Anspruch auf eine bestimmte Gestaltung der

[91] UN Committee on Economic, Social and Cultural Rights (CESCR), *General Comment No. 24 on State Obligations under the International Covenant on Economic, Social and Cultural Rights in the Context of Business Activities*, E/C.12/GC/24 (2017), available at https://digitallibrary.un.org/record/1304491 (last visited 19 July 2022], at 16.

[92] See for example UN Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 3, at 14.

[93] *Ibid.*, at 40.

[94] See also Boggio and Romano, 'Freedom of Research and the Right to Science: From Theory to Advocacy', in *The Freedom of Scientific Research: Bridging the Gap between Science and Society* 1 (2019).

> Zulassungsvoraussetzungen und auf eine bestimmte Begrenzung oder Reduktion allfälliger Gebühren ableiten; es sei dem nationalen Gesetzgeber anheim gestellt, wann, mit welchen Mitteln und in welchem Zeitraum er das gesetzte Ziel erreichen wolle, sofern er die betreffende Forderung nicht überhaupt schon als erfüllt betrachte."[95]

In recent years the Court has taken on a less strict approach and acknowledged that ESC-rights might be justiciable in the case of arbitrariness or if the act or omission disregards the objectives of the ICESCR.[96] However, the Court still upholds the legal fiction that ESC-rights are generally not directly applicable and therefore not justiciable.[97] This overall rejection is all the more astonishing since Switzerland has already been criticized by the Committee's Concluding Observations to Switzerland's first state report in 1998[98] and again in 2010[99]. Furthermore, legal scholars are increasingly of the opinion that ESC-rights are indeed justiciable.[100] A study issued by the Swiss Centre of Expertise in Human Rights (SCHR) analysed that Switzerland already fulfils the majority of the rights protected in the Covenant and should therefore depart from the argument that ESC-rights merely entail programmatic character to policymakers.[101] With regards to the question of the justiciability of the scientific freedom protected in Art. 15(3) ICESCR, the authors of the study conclude that since scientific freedom is protected in the Swiss constitution, federal laws, as well as cantonal constitutions and laws, several individually enforceable claims may be brought

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[95] BGE 120 Ia 1 E. 5d S. 12 f. and confirmed in BGE 126 I 240.

[96] BGE 130 I 113 E. 3.3, S. 124.

[97] Urteil des BGer 2C_738/2010 vom 24. Mai 2011 E. 3.2.1.

[98] 'The Committee disagrees with the position of the State party that provisions of the Covenant constitute principles and programmatic objectives rather than legal obligations, and that consequently the provisions of the Covenant cannot be given legislative effect. The Committee does not share the view of the Swiss authorities and recalls that in its General Comment No. 3 of 1990 on the nature of States parties' obligations under article 2 of the Covenant, it refers to a number of provisions in the Covenant, such as those of article 8 on the right to strike and those of article 13 on the right to education, which seem to be capable of immediate application within the judicial system. The Committee is of the view that any suggestion that the above-mentioned provisions are inherently non-self-executing seems to be difficult to sustain.' UN Committee on Economic, Social and Cultural Rights (CESCR), *Concluding Observations of the Committee on Economic, Social and Cultural Rights: Switzerland*, E/C.12/1/Add.30 (1998).

[99] 'The Committee regrets the State party's persistent position that most of the provisions of the Covenant merely constitute programmatic objectives and social goals rather than legal obligations. According to that position, some of those provisions cannot be given effect in the domestic legal order of the State party and cannot be directly invoked before domestic tribunals and courts of the State party.' UN Committee on Economic, Social and Cultural Rights (CESCR), *Concluding Observations of the Committee on Economic, Social and Cultural Rights: Switzerland*, E/C.12/CHE/CO/2-3 (2010), at 5.

[100] Addo, 'Justiciability Re-Examined', in R. Beddard and D. M. Hill (eds.), *Economic, Social and Cultural Rights: Progress and Achievement* (1992) 93; K. Boyle, *Economic and Social Rights Law : Incorporation, Justiciability and Principles of Adjudication* (2020); Courtis and International Commission of Jurists, *supra* note 12; Khaliq and Churchill, 'The Protection of Economic and Social Rights: A Particular Challenge', in H. Keller and G. Ulfstein (eds.), *UN Human Rights Treaty Bodies* (2012); Mapulanga-Hulston, 'Examining the Justiciability of Economic, Social and Cultural Rights', 6 *The International Journal of Human Rights* (2002] 29; M. Trilsch, *Die Justiziabilität wirtschaftlicher, sozialer und kultureller Rechte im innerstaatlichen Recht* (1st ed. 2012., 2012]; F. Weibel, 'The Justiciability of Economic, Social and Cultural Rights in Switzerland' (2016] (Master Thesis thesis, available at University of Basel].

[101] Schweizerisches Kompetenzzentrum für Menschenrechte (SKMR), 'Die Anerkennung justiziabler Rechte im Bereich der wirtschaftlichen, sozialen und kulturellen Menschenrechte durch das Bundes- und das kantonale Recht - Studie des Schweizerischen Kompetenzzentrums für Menschenrechte zuhanden des Lenkungsausschusses EDA/EJPD, verfasst von Jörg Künzli, Anja Eugster und Alexander Spring', (2104).

forward based on the ICESCR.[102] Whether Switzerland will change direction in its next state report remains to be seen.

5.2 Complaints to the UN Educational, Scientific and Cultural Organization (UNESCO)

Within the UNESCO framework – after the exhaustion of domestic remedies – communications can be brought forward within the UNESCO Procedure 104[103] if a human right within the organisation's field of competence is violated. The cases are reviewed by the UNESCO Committee on Conventions and Recommendations.

The human rights violations must be massive, systematic or flagrant, which result either from a policy contrary to human rights applied de jure or de facto by a State or from an accumulation of individual cases forming a consistent pattern.[104] The UNESCO Procedure 104 - although it is largely similar to other UN complaints mechanisms – is not a judicial procedure as such. The goal of the Committee is to find a solution in cooperation with the state concerned:

> "(…) Since the Committee is not in any way an international tribunal, it endeavours to resolve the problem in a spirit of international cooperation, dialogue, conciliation and mutual understanding. Out of a concern for efficiency in the search for a friendly solution, the Committee works in the strictest confidentiality, which is vital to the success of its action. (…)"[105]

From 1978 to 2021, the UNESCO Committee examined 615 cases, none of which address the RtS.[106] However, given the confidential character of the procedure and the fact that UNESCO is "(…) basing its efforts on moral considerations and its specific competence, should act in a spirit of international co-operation, conciliation and mutual understanding; and recalling that UNESCO should not play the role of an international judicial body"[107], one might call into question the effectiveness of such a procedure.[108]

5.3 Complaints to the UN Committee on Economic, Social and Cultural Rights

On the UN-level – and after the exhaustion of domestic remedies – so-called 'communications' regarding infringements of all rights of the ICESCR can be brought before the Committee under the Optional Protocol to the International Covenant on Economic, Social and Cultural Rights (OP-

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[102] *Ibid.*, at 63.

[103] Executive Board of UNESCO, *Decisions Adopted by the Executive Board at Its 104th Session*, 104 EX/Decisions (1978), at 3.3.

[104] *Ibid.*, at 3.3, 18.

[105] UN Educational, Scientific and Cultural Organisation (UNESCO), *UNESCO's Procedure for Dealing with Alleged Violations of Human Rights*, Programme and Meeting Document, SHS-2020/SANS COTE (2022).

[106] *Ibid.*

[107] Executive Board of UNESCO, *supra* note 108, at 3.3, 7.

[108] see for example Symonides, 'UNESCO's Contribution to the Progressive Development of Human Rights', 5 *Max Planck Yearbook of United Nations Law* (2001) 307; Weissbrodt and Farley, 'The UNESCO Human Rights Procedure: An Evaluation', 16 *Human Rights Quarterly* (1994) 391.

ICESCR).[109] In 2019, the first communication was submitted under this procedure to claim a violation of three aspects of the RtS.[110] However, the claims on the RtS were declared inadmissible as the claimed violations were not substantiated sufficiently by the authors of the complaint. Thus, a view by the Committee on the RtS has never been issued up to this point.

To this date, Switzerland has not even signed the OP-ICESCR, which is why a complaint against Switzerland cannot be brought forward under this procedure.

5.4 State Reporting Procedures

The aim of the state reporting procedure is inter alia to review the legislation and procedures on a specific area of human rights, to grasp the hurdles and shortcomings for the implementation and to build the basis for the further development of human rights. Every member state of the ICESCR needs to submit a state report about the implementation and practical experiences of the rights of the Covenant. During public meetings at the UN-level, solutions are sought to overcome the hurdles of implementation by means of a dialogical and constructive process. The state reporting procedure ends with “Concluding Observations”, a report by the Committee in which it gives recommendations in the form of directives to the state concerned.

Although it is compulsory for states to submit their reports to the Committee, few states submit their reports within the subscribed period. Furthermore, the reports are often formulated as statements of intent instead of an informative assessment of the real situation supported by statistical data and information. This can be remedied to a certain degree with so-called “Shadow Reports” by NGOs such as national human rights institutions. To this date, neither the state report by Switzerland in 2018[111] nor the Shadow Reports by NGOs in 2019[112] as well as the Concluding Observations by CESCR in 2019[113] mention Open Access or the RtS. However, given GC No. 25 was published in 2020 to raise awareness of the RtS and to help states in their reporting procedure, it can be hoped that the issue of Open Access in light of the RtS might find its way into the next reporting procedure in 2024.[114]

5.5 Universal Periodic Review

Another political tool for mobilisation of OA in light of the RtS is the so-called Universal Periodic Review (UPR). States are obliged to submit every five years a report on the fulfilment of human

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[109] UN General Assembly, Optional Protocol to the International Covenant on Economic, Social and Cultural Rights, A/RES/63/117, 2009.

[110] Committee on Economic, Social and Cultural Rights (CESCR), *supra* note 9.

[111] Vierter Bericht der Schweiz zur Umsetzung des Internationalen Paktes über die wirtschaftlichen, sozialen und kulturellen Rechte (UNO-Pakt I), 14.2.18, available at https://www.seco.admin.ch/seco/de/home/Arbeit/Internationale_Arbeitsfragen/UNO.html.

[112] See 4th Swiss examination on the implementation of the International Covenant on Economic, Social and Cultural Rights - Civil society’s parallel report ("Platform of Swiss NGOs for Human Rights") on the Swiss Government's obligations to respect and protect economic, social and cultural rights (ESC Rights), September 2019, available at https://fian-ch.org/content/uploads/Rapport_parallele_plateformeDH_final_EN.pdf

[113] Committee on Economic, Social and Cultural Rights (CESCR), *Concluding Observations on the Fourth Periodic Report of Switzerland*, E/C.12/CHE/CO/4 (2019).

[114] *Ibid.*, at 64.

rights obligations. As important stakeholders in this process, human rights experts as well as groups can submit information or make statements during the regular sessions of the Human Rights Council.

6 Summary

Human rights can be brought forward to support Open Access. This has been made clear by the Committee on Economic, Social and Cultural Rights in its long-awaited General Comment No. 25 published in spring 2020, in the midst of the global Corona pandemic, addressing the so-called Right to Science (RtS). The Committee makes clear that Open Access forms part of the so-called RtS in the digital age. Yet, there remain some hurdles to claiming access to scientific publications via the RtS.

Firstly, the Committee outlines states' duties to promote OA as part of their obligation to fulfil the RtS. This dimension of the right is most relevant in this context because of the strong institutional and organizational character of science, which requires positive action on the side of states, usually through legislation. However, the duty to promote OA does not mean that states immediately need to ensure that OA becomes the default publishing mode, let alone enact legislation making OA mandatory. Rather, the duty to promote OA is an obligation of conduct, requiring states to take steps rather than reaching a concrete result. In relation to the academic publishing system, the Committee spells out that these obligations entail that states develop a strategy or action plan to realize this dimension of the right. Switzerland has an encompassing OA strategy in place since 2017 and thus prima facie fulfils its obligations in this context. However, in case Switzerland decides to make budgetary cuts or restrict its strategy in the future, this could mean a prohibited retrogressive measure, leading to a violation of the RtS in the future. States not having an OA strategy or action plan in place also risk violating the right.

While the obligation to fulfil stands out when it comes to the academic publishing system, also the other dimensions of the right, namely the obligations to respect and protect the right have a role to play in relation to OA. Given the central role of Intellectual Property (IP) legislation in restricting access to science and its applications, it is unsurprising that the Committee addresses the complex relationship between IP regimes and human rights. While recognizing that copyright limits the access to knowledge and that the high prices in the publishing sector build an obstacle for many researchers around the globe, the Committee goes less far than the UN Special Rapporteur in the Field of Cultural Rights in her report from 2014, asking states, among other things, to undertake impact assessments of their copyright legislation to ensure that they serve legitimate aims. The Committee, by contrast, merely states that the social function of IP regimes should prevail and that a balance needs to be reached between access and protection.

However, the Committee also makes clear that as part of their minimum core obligations in relation to the RtS, states are obliged to eliminate laws that *unjustifiably* limit access to science. While leaving open what such an unjustifiable limitation would mean, one could argue that this entails to test whether copyright legislation still fulfils its object and purpose in the digital era. Since one

of the core purposes of copyright legislation in continental Europe was to provide financial incentives for authors and publishers, the case can be made that this has become redundant, at least for publicly funded research. Publicly funded researchers do not need these economic incentives, or at least the public interest in accessing research funded by taxes outweighs these financial interests. Publishers, on the other hand, have successfully developed Open Access business models, among them chiefly the so-called gold model. Shifting the costs from readers to authors, they do equally not depend anymore on revenue generated through access restrictions.

Finally, the question arises whether states are obliged under their obligation to protect to step in and prevent other practices, especially by the big publishers considered to be problematic. There is broad agreement that besides copyright restrictions, other issues in relation to the publishing system provide structural obstacles to equitable access to science – and challenges to the RtS. This concerns, for example, practices of data tracking increasingly resorted to by big publishers which have already attracted vivid criticism. Another hotly debated issue concerns the success of the so-called gold OA model which shifts the costs from readers to authors ("pay to publish") – and arguably also merely shifts the problem to a different place, since the prices in the publishing sector remain high. However, the Committee did not address these issues and whether states need to intervene, including through legislative means, to set limits on the big publishers.

Further hurdles to access scientific publications via the RtS also remain when it comes to advocating OA. Regarding judicial pathways – in other words, to bring a case on OA forward via the RtS – the problem of non-justiciability must first be overcome on the national level. Despite statements by the Committee and dominant scholarship, the Federal Supreme Court of Switzerland still views ESC-rights as non-justiciable. Furthermore, a complaint cannot be submitted to the Committee at the UN-level, since Switzerland has not ratified the OP-ICESCR. Lastly, a complaint could be submitted to UNESCO, but this procedure has proven to be a rather "toothless tiger". What however seems to be a less gloomy outlook for advocating OA via the RtS are the political pathways. Non-state actors such as NGOs and interest groups can submit reports within these procedures and also take part during the discussion rounds, offering more promising opportunities for further human rights advocacy.