

Abstract

The human rights enumerated by article 15 of the International Covenant for Economic Social and Cultural Rights, and by article 27 of the Universal Declaration on Human Rights, have been described as under elaborated, underdeveloped, and neglected. It is only as a result of the concerted efforts of dedicated scholars and commentators interested in elucidating the normative content of article 15 that the right to science has begun to awaken from its slumber. This led, in 2020, to the CESCR publishing General Comment No. 25. In a globalised age of technology, there has never been a greater need for a human right to science. Access to the benefits of scientific and technological progress and scientific freedom are rights fundamental to human flourishing. However, commentators have repeatedly asserted that article 15 also guarantees a right to protection from the adverse effects of scientific progress and its applications. More than any other aspect of article 15, this right still remains under elaborated, underdeveloped, and insufficiently analysed, if indeed it can be properly interpreted from article 15. That is what this thesis attempts to do.

Chapter 2 seeks to situate the articulation of that right in its proper context. It discusses instrumental tensions, conflicts, and uncertainties that exist as a consequence of the inextricable relationship between enjoying the benefits of, and protection from the risks of harm arising from, scientific and technological progress. The context in which a right to adverse effects protection must operate is also one of increasing uncertainty and sociotechnical change. Measures to prevent or mitigate adverse effects, or minimise risks, must account for these tensions, conflicts, and uncertainties.

Chapter 3 sets out some of the consequences of the neglect of article 15 rights, and of early discourse concerning the relationship between human rights and intellectual property rights. Putting this in the context of increasing politicisation, privatisation, and commercialisation of science, justifies a right to participate in scientific progress, as interpreted by General Comment No. 25. Participation in scientific progress is a fundamental component of protection from the adverse effects of scientific and technological developments, which also informs the analysis in Chapter 6 and 7.

Chapters 4 and 5 seek to justify a right to protection from the adverse effects of scientific progress and its applications by reference to the Vienna Rules of treaty interpretation, and specifically the rules regarding subsequent agreements and subsequent practice in the interpretation of treaties. The chapters situate the pronouncements of treaty bodies, and other non-state actors within the Vienna Rules and stress the importance of the legitimacy of their interpretations for making international law. Chapter 5 then explores soft law and practice arising out of the UN project on Human Rights and Scientific and Technological Developments, which began in 1968 with the Proclamation of Tehran, applying it to the interpretation of article 15 and demonstrating that concerns for the adverse effects of scientific and technological developments have existed since the inauguration of international human rights law.

Chapter 6 analyses the evolution of various formulations of adverse effects protection under article 15, from the UN practice described in Chapter 5, to the influential Venice Statement published in 2009. It analyses the approach to risks arising from scientific progress and its applications taken by General Comment No. 25, identifying its strengths and weaknesses, before formulating a right to protection from the adverse effects of scientific progress and its applications which builds on normative foundations that already exist, and which complements and develops the approach taken by the General Comment.

Chapter 7 elaborates a legal regime of harm prevention and precaution, qualified by obligations of due diligence. It sets out the legal provenance and justification for such a regime in international

human rights law, and under article 15 in particular, and relies on existing regimes of harm prevention, particularly in international environmental law, in order to specify the obligations of prevention and precaution that comprise it.

Chapter 8 concludes by drawing together the threads of the thesis, in particular emphasising the role of norm entrepreneurs, epistemic and expert communities, and civil society in the future implementation, and therefore interpretation, of rights under article 15, but particularly a right to protection from the adverse effects of scientific progress and its applications.