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Assessment of professionalism: From where have we come – to where are we going? An update from the Ottawa Consensus Group on the assessment of professionalism

Brian Hodges^a, Robert Paul^{b,c}, Shiphra Ginsburg^{c,d}, and the Ottawa Consensus Group Members

^a Wilson Centre for Research in Medical Education, University Health Network and Faculty of Medicine, University of Toronto, Toronto, Canada; ^b Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, Canada; ^c Wilson Centre for Research in Medical Education, University Health Network and University of Toronto, Toronto, Canada; ^d Department of Medicine, Mount Sinai Hospital, University of Toronto, Toronto, Canada

ABSTRACT

Background: In 2009, an International Working Group (IWG) on the Assessment of Professionalism began collaborating and published recommendations in 2011. Nearly a decade later the IWG reconvened to take stock of the state of practice and research in professionalism and the impact of the 2011 report.

Method: A bibliometric study identified all publications on assessment of professionalism since 2011, noting those that cited the original report. Articles were coded to identify the reason for citation and new trends in assessment. Bibliometric data were supplemented by discussion groups held at key international education meetings.

Results: Six-hundred publications on the assessment of professionalism were found in Google Scholar and 164 in Web of Science since 2011, of which 177 (30%) and 84 (50%) respectively cited the original IWG publication. English language publications were most common (83%), but there were articles in 13 other languages by authors from 40 countries. The report was cited commonly to justify attention to professionalism in general (41%), assessment of professionalism (38%) and to explore professionalism in different countries and professions (25%). A thematic analysis showed that of 9 research areas recommended in 2011, 7 of 9 categories were represented with a large increase in research across languages and cultures.

Conclusions: Though the assessment of professionalism remains a challenge the research base continues to grow, especially related to professionalism across cultures and languages, and a large percentage of publications cite the IWG recommendations. There remains a gap in research and writing about patients' perspectives.

CONTACT Robert Paul  robert.paul@mail.utoronto.ca The Wilson Centre, 200 Elizabeth Street, 1ES-565, Toronto, Ontario M5G 2C4, Canada.

*Ottawa Consensus Group Members: Mohamed Al-Eraky, Yonas Baheretibeb, Madawa Chandratilake, Fabrizio Consorti, Richard Cruess, Sylvia Cruess, Rhena Delport, Martin R. Fischer, Fred Hafferty, Ming-Jung Ho, Eric Holmboe, Maria Athina (Tina) Martimianakis, Hiroshi Nishigori, Charlotte Rees, Olle ten Cate, Walther Van Mook, Val Wass, Tim Wilkinson, Winnie Wade.

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Introduction

In 2011, an International Working Group on the Assessment of Professionalism (IWGAP) released a report that was the culmination of two years of work, identifying key themes and proposing new directions in this domain (Hodges et al. 2011). The group was established in 2009 in preparation for the International Ottawa Conference on Assessment held in Miami in 2010. Since 2011, the literature on professionalism has continued to grow. For the current paper, the IWGAP reconvened to consider and evaluate this literature, to explore emerging themes in research and practice on the assessment of professionalism, and to assess the impact of the original report.

As one of several such working groups, IWGAP was convened recognizing that the definition and measurement of professionalism is a major preoccupation for medical educators around the world. Yet it was apparent from the first meeting that there was ambiguity, confusion and at times controversy about what professionalism is in general, let alone exactly which dimensions of it to assess and how. The task of creating a consensus statement was a tall order.

Practice points

- The assessment of professionalism is an important domain with a growing evidence base.
 - Assessment of professionalism must take into consideration contextual, cultural, and linguistic specificities and there is a growing literature in these areas to assist educators.
 - Further research is needed to validate tools and approaches for the assessment of professionalism, particularly across cultures and languages.
 - Research that explores the perspectives of patients and the tensions of individual and institutional values in regard to professionalism is of high priority.
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A pivotal insight arrived at early, was that it would be more valuable to map the diversity of ways professionalism is understood than trying to arrive at a single, reductionist definition. To begin, the working group members identified three dozen key articles that captured important dimensions of the assessment of professionalism. Next, a discourse analysis of selective articles was undertaken using an empirical discourse analysis methodology (Hodges et al. 2008). The details of this methodology are described in the original report (Hodges et al. 2011). The approach was novel and different from the traditional: the goal was not to reach a singular consensus but rather to characterize different ways that professionalism was conceptualized, and assessed, around the world. The relative diversity of the group helped to ensure broad coverage of different cultures and contexts. Interestingly, almost all literature identified at that time was in English; almost entirely produced by authors in Anglo-Saxon/Western countries. This is an observation that we will return to in the current paper because that landscape has changed greatly in the subsequent decade. Let us briefly review the findings and recommendations originally published in 2011.

The assessment of professionalism in the selected literature was characterized in three broad ways:

1. Professionalism as an individual-level characteristic, trait, behavior or cognitive process;
2. Professionalism as an interpersonal-level process or effect (teacher-student, student-student, student-patient); and
3. Professionalism as a societal/institutional-level phenomenon associated with power, institutions, and society.

A set of general recommendations was proposed, focused on areas for future research. Please see [Table 1](#). In addition, more detailed recommendations for each level (individual, interpersonal, and societal/institutional) were produced, although these are not reproduced here.

Table 1. General Recommendations on the Assessment of Professionalism from the 2011 Report of the International Working Group. ([Table view](#))

Professionalism:

1. Varies across historical and cultural contexts
2. Concrete definitions will help guide effective teaching methods and defensible assessments
3. Is related to medicine's social responsibility; definition should be refined regularly to reflect change

4. Needs to be defined, through dialog with the public; at all three levels: individual, interpersonal, systems/institutional
 5. Should be part of a culture of improvement: formative methods should predominate
 6. Existing literature is mostly Anglo-Saxon: cross-cultural caution/re-validation is needed
 7. A diversity of approaches to defining and measuring professionalism is valuable (sociology, anthropology, psychometrics, psychology)
 8. Each perspective (and related assessment methods) will make some elements of professionalism visible; deflect attention from others
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The original working group created an epistemological taxonomy to reflect the different scientific perspectives that could underpin each of these categories. These epistemological positions ranged from positivist (there are fixed truths about professionalism that can be uncovered through empirical scientific research) to constructivist (there is no fixed thing that can be called professionalism; rather it is recreated in each culture and historical period). Thus someone could be interested in assessing the individual level of professionalism from a positivist point of view and create a universal measure of professional behaviors (a recent example is Kelly et al. 2012). By contrast, someone else could take an interest in assessing individual professionalism by looking at how international elective medical students adapt to different conceptions of professionalism in Taiwan than do elective medical students in Canada (constructivist) (e.g. Ho et al. 2012).

Similarly, at the societal level we found researchers interested in identifying and assessing principles of professionalism assuming universal concepts such as the notion of a social contract (Cruess et al. 2017), while others were concerned with assessing students' awareness that professionalism was related to power and privilege and could be used to enforce loyalty to an elite (Martimianakis et al. 2009). The forms of assessment practice that flowed from each position were radically different and Working Group members felt it was an important contribution to broaden conversations about professionalism.

While the epistemological matrix was created initially to help the group preserve a diversity of perspectives, we learned subsequently that it has been used in other areas of health professions education to map out epistemological assumptions (Kuper 2012). This was a fortuitous, if unintended, result of the IWG's efforts.

A decade later, and in preparation for the International 2018 Ottawa Conference in Abu Dhabi, the IWG agreed to reassemble to take stock of what had been accomplished since the original publication and what questions still remained to be explored. There were several objectives identified. One goal was to conduct a bibliometric analysis to document how the original 2011 report had been taken up and for what purposes. Another goal was to examine the degree to which calls for research in the original report had been heeded (Table 2). A third goal was to identify changes or emerging innovations in practices of assessment.

Table 2. 2011 Recommendations for Research on the Assessment of Professionalism and number of articles addressing this theme between 2011 and 2018. (Table view)

1. Examine professionalism across linguistic and cultural contexts (34)
2. Compare definitions of Professionalism across health care professions (25)
3. Characterize elements of professionalism amenable to learning (34)
4. Examine links between assessment of professionalism and other forms of assessment (29)
5. Incorporate/evaluate patient perspectives in assessment of professionalism (2)
6. Explore professionalism in clinical workplaces (20)
7. Explore ways assessment data can change the culture of education (23)
8. Consider what happens when expectations at an individual level conflict with those at an institutional/systems level (1)
9. Explore innovative ways to collect data and assess professionalism (29)

All but two members of the original IWG were available and willing to participate. To ensure balance across regions of the world, additional members were added from Sri Lanka, Saudi Arabia, Italy, and Ethiopia. Working group members are listed on the first page of this article.

Method

To gain the widest possible perspective to accomplish the proposed goals, we used two sources of information: a bibliometric analysis and discussion groups.

Bibliometric study

Bibliometric and citation studies were conducted to identify all publications using the search terms “Assess*,” “Assessment,” and “Professionalism” and the subset that cited the original 2011 report. Two databases were used: Google Scholar and Web of Science. Each has a different scope, the former being very inclusive and casting a wide net that identifies many types of publications (including books, theses, and abstracts) as well as publications in many languages. The latter provides a more classical and constrained review of scientific articles published in indexed journals.

Content analysis: Practices of assessment of professionalism

Articles specifically mentioning assessment were then examined to identify evidence for existing methods of assessment and the emergence of new thinking and practices. Three authors (BH, RP, SG) participated in this analysis. RP conducted the detailed article review and coding, while SG and BH participated in secondary reviews and coding of subsamples of articles for comparison and to contribute to the overall coding structure.

Rhetorical (empirical discourse) analysis: Purposes for citing the 2011 report

Articles were coded thematically and classified according to the rhetorical use of the citation, a methodological approach from the family of discourse analysis called “empirical.” We did not analyze the power relations linked to specific discursive constructions of professionalism that would be part of a critical discourse analysis methodology (Hodges et al. 2008). The process of coding citations for rhetorical purposes is described elsewhere (Hodges et al. 2014). Briefly, the method involves identifying an archive of articles that cite a particular research article (or set of articles) and then identifying the stated, or implied, purposes for citation. Rhetoric is the study of how language is used to persuade and using this perspective an analysis aims to characterize what an author/authors are attempting to persuade readers to think/do. RP conducted this coding and analysis.

Discussion groups

Finally, discussion groups were held by members of the Working Group at two international conferences: The 2017 Association of Medical Education in Europe (AMEE) Conference in Helsinki and the 2018 International Ottawa Conference on Assessment in Abu Dhabi. At each conference, BH and other members of the IWG held an open-ended discussion about the evolving field of professionalism and its assessment. The orienting question was “What do you think are the important considerations in assessment (and research on assessment) of professionalism in the next 10 years?” The in-conference discussion group was preceded and followed by email and, where possible, face-to-face discussion among group members.

Identified themes were captured in notes and on flip charts, summarized and presented back to the group members for further discussion. These ideas were also presented at an open workshop and at the final plenary session of the International Ottawa Conference. Audience members were invited to give feedback at both sessions either in person or afterward by email (to BH).

Numerous comments were received from Working Group members and from general conference attendees over the period of March 2018–July 2018 and these were used to further refine the themes. Notes were taken at each face to face meeting with members of the working group and along with any subsequent ideas communicated through email were summarized in themes to capture expert positions related to the perceived future priority areas in the field of assessment of professionalism.

Results

Bibliometric study

Google Scholar, a highly inclusive database, identified 600 publications on the assessment of professionalism between 2011 and 2018. Focusing specifically on citations of the 2011 IWG report, as of February 2018 there were 174 citations (including 138 scientific articles, 15 theses, 8 books, 2 commentaries and 1 set of clinical guidelines) confirmed by citation search. This is an annual citation rate of 22 per year since 2011 and represents nearly 30% of all types of publication on the topic of assessment of professionalism.

To gain a sense of the uptake of our work in traditional publications, we also examined the more restrictive Web of Science database. Web of Science revealed that of all scientific articles published on the assessment of professionalism between 2011 and 2018 ($N = 168$), 84 (50%) cited our original 2011 report.

Having established, through citation analysis, a sense of the uptake of the 2011 report (30% of publications identified by Google and 50% of articles identified in Web of Science) we decided to continue our analysis using the more inclusive Google Scholar database to better understand the uptake of the original working group report internationally. We reasoned that scholarship in a burgeoning area such as professionalism might be more broadly understood thematically if we included books, theses, and abstracts.

Though most publications were in English (83%), we found citations of our 2011 report in 13 other languages (Chinese, French, German, Italian, Japanese, Korean, Latvian, Malay, Norwegian, Farsi, Polish, Portuguese, Spanish) and by authors from 40 different countries (UK (30), USA (27), Canada (14), Taiwan (10), The Netherlands and Saudi Arabia (6 each) and Sri Lanka and Ireland (5 each).

The primary epistemic domain of the collected texts was medical education (71%), with 3% from dental education, 2% each from nursing and psychology and a smaller number from other health professions and general education. Perhaps not surprising given the breadth of the working group, 39 (22%) of works citing the original report involved one or more members of the IWG.

Content analysis: Practices of assessment of professionalism

We removed abstract-only and inaccessible entries. We also removed the 21 publications that were not written in English, as we were unable to analyze them in depth. This left 122 (70%) articles suitable for more detailed coding. All articles about assessment, including the 69 articles that had “assess” or “assessment” in the title, were further examined to identify emerging research directions since the first report and any new methods of assessment identified.

Topics addressed in the articles were also compared to the Areas for Future Research that we recommended in our 2011 report. Seven of the nine categories (Table 2) were well represented, and most notably, a large increase in research on professionalism in languages other than English and cultures other than Anglo-Saxon/Western cultures. However, calls for research on patient perspectives and the topic of individual versus institutional conflicts remained largely absent.

Thematic findings

Articles specifically mentioning assessment were examined to identify evidence for existing methods of assessment and the emergence of new thinking and practices. We made the following observations about the literature.

A deeper engagement with conceptions of professionalism

At the time of our original report, publications about professionalism were on the rise, but relatively few authors were exploring the conceptual basis of professionalism. We called for greater breadth in epistemological understanding (see, for example, recommendations 1 and 2). Since that time several works have indeed explored the historical and conceptual constructions of professionalism and added in layers of complexity such as the political and sociological dimensions. This includes several theses (van Mook 2011; Zijlstra-Shaw 2015) and three books (Levinson et al. 2014; Cruess et al. 2016b; Monrouxe and Rees 2017). Of course, we do not assume that our recommendations alone led to authors focusing on conceptual understandings of professionalism. Nevertheless, this finding was welcome and reflects a general maturation of research in this domain.

Greater use of taxonomies of assessment methods

In the 2011 report, we highlighted the need to use multiple tools to assess professionalism and cautioned about depending on a single, point-in-time instrument. An important advance in the literature has been the creation of taxonomies that attempt to map multiple assessment tools to an overarching framework. A common approach, for example, is to use Miller's pyramid, the well-known hierarchy of "knows, knows how, shows and does" to conceptualize integrated programs of assessment of professionalism. To cite one example, Monrouxe and Rees (2017) show how assessment tools can be used at each level of Miller's pyramid and how dilemmas that arise in trying to assess at each level emerge, illustrated with quotations from both teachers and students. In addition to this, Cruess et al. (2016a) suggested an even higher peak to Miller's pyramid: professional identity.

Some authors picked up the 3-dimensional framework (professionalism can be seen through individual, interpersonal, and societal/institutional lenses) to organize thinking about assessment (Goldie 2013). Others analyzed the adequacy of professionalism assessment across a whole curriculum, such as Soliman and Sattar (2018) who mapped where assessment tools are used and where there is potential to do so across a full medical school program. Finally, though it was published just prior to the appearance of our first report, Wilkinson et al's (2009) framework of nine clusters of assessment tools for measuring professionalism was cited in several publications (Goldie 2013; Guraya et al. 2016).

Our 2011 report contained a recommendation to focus on increasing the depth and validity of existing methods rather than continuing to promulgate new tools. Though this was reiterated (Goldie 2013) new tools continue to proliferate and many seem to be variations on existing measures. However, a few novel approaches appeared, including Young and colleagues' tool for the assessment of the professionalism of teachers (Young et al. 2014) and Cendán et al's (2017) mobile, web-based app.

A focus on psychometric properties of assessment instruments

Increased attention is being given to understanding the reliability and validity of existing instruments. Again we do not wish to imply causality in relation to our report, but rather to document a trend. This too is a welcome direction in the field. Several review papers created inventories of a large number of published instruments and compared them using various parameters. Rodriguez et al. (2012) for example, summarized all instruments used for the assessment of professionalism in emergency medicine in terms of reliability,

validity, and feasibility. Most ambitious was a review by Li et al. (2017) from China in which 74 tools and 80 empirical studies were compiled to create a comprehensive table with multiple dimensions of reliability (internal consistency and measurement error) and validity (content, structural, hypothesis testing, cross-cultural, and criterion). The authors argue that theirs is the first systematic review of the measurement properties of professionalism assessment instruments using an accepted, standardized framework (the “Consensus-based standards for the selection of health status measurement instruments” COSMIN). Though it is debatable that professionalism is a “health status measurement”, the use of a standardized approach to evaluate and compare measurement tools is useful. The addition of a category of “cross-cultural validity” in this work, while not highly populated with data, is also a welcome response to the need for attention to this domain. These authors also noted, interestingly, that of all the tools they identified in the literature for the assessment of professionalism, the majority (55%) could be traced conceptually to 3 large institutional competence frameworks: the American Board of Internal Medicine, the Royal College of Physicians and Surgeons of Canada and the Accreditation Council on Graduate Medical Education.

In addition to the ongoing focus on the psychometric properties of instruments, there are increasing calls to pay more attention to the longitudinal assessment of professionalism and a greater focus on formative feedback, something called for in the 2011 report. For example, Mahboob and Evans (2013) emphasize the importance of “an assessment for learning strategy” in relation to professionalism.

Greater focus on culture and language

Perhaps the most dramatic finding was the large increase in publications exploring the assessment of professionalism across many cultures and languages. In our 2011 report, we criticized a dominance of writing from Anglo-Saxon/Western authors and the near total lack of cross-cultural comparison studies. Thus it was heartening to find more than 30 publications examining professionalism in linguistic and culturally diverse contexts such as Japan (Nishigori et al. 2014), Korea (Kwon et al. 2017), Saudi Arabia (Soliman and Sattar 2018), India (Modi et al. 2014), Italy (Consorti et al. 2012), Ethiopia (Fantahun et al. 2014), Gulf-Arabic countries (Al-Eraky and Chandratilake 2012), Iran (Emadzadeh et al. 2014) and Sri Lanka (Chandratilake 2016). Some of this work was quantitative, for example, the P-MEX, an instrument originally created in Canada was evaluated for reliability, validity and cultural relevance in Japan (Tsugawa et al. 2011). The most ambitious was a scoping review of papers on medical professionalism published in Mandarin. Though the authors found 695 articles that had something to do with professionalism, only 43 were empirical studies and of those, just a handful about assessment. Nevertheless, these authors drew attention to the role of traditional Chinese values such as Confucianism and Taoism, as well as the political system in China (Wang et al. 2016).

Rhetorical analysis: Purpose of citing the 2011 report

The subset of articles published in English was coded to understand rhetorically the purpose of citation. Simply put, “For what reason was our 2011 report cited?” Most commonly citations served to justify attention to professionalism in general (41%), followed by justifying the assessment of professionalism (38%) and third to argue for exploring professionalism in different countries and professions (25%). Very few citations involved a study drawing on the methodology of the 2011 report (2%) and few debated the concepts professionalism or recommendations about assessment that appeared in our original report (3%).

Citations appeared throughout all sections of publications but the most common location was in the introduction. Most often there was only a single citation (54% of the papers). An interesting observation was the fairly prolific citation of our report in articles that were not actually about assessment, but was about professionalism more generally. Often a statement was made about the valuable or essential role of professionalism linked to a citation of the IWG report. This suggests that for some in the field, the 2011

IWG report functions as an authoritative voice about the importance of professionalism generally, perhaps more so than anything the report has to say specifically about assessment.

Discussion groups

Finally, data were synthesized from the discussion groups held at AMEE (Finland 2017) and the Ottawa Conference (Abu Dhabi 2018). The following are some of the themes that emerged in those discussions.

Evolution of the concept of professionalism

- There appears to be greater interest in, and in some cases a shift in language, away from professionalism toward professional identity formation.
- There is more attention to the role of social responsibility and systems issues including holding institutions accountable for conditions that put health professionals in untenable dilemmas.
- Questions are being raised about collective competence: can the notion of professionalism be applied to a group rather than just to individuals?
- A critical perspective has emerged: is professionalism perhaps a defensive position to maintain elite privileges? To what extent does “remediation” function as a form of social control?

Changes in assessment practice generally affect the assessment of professionalism

- The concept of validity in assessment itself is evolving: there is greater emphasis on assessment over time and assessment “for learning” instead of “of learning.”
- There is a movement away from assessment of individual traits, toward more consideration of groups, contexts, and systems.
- Entrustment is a more prominent concept in assessment, such as the widespread adoption of “entrustable professional activities” (ten Cate et al 2016), raising the idea of assessing professionalism in an integrated way

Changes in the context of healthcare and medical education

- There is a greater focus on the learning environments and how context determines behavior.
- There is a vast and growing literature about student and physician burnout, wellness and resiliency including balancing work life and private life, and issues of appropriate duty hours.
- More focus is given to hidden curricula and how they implicate structures and cultures in the cultivation of professional behaviors.
- Institutions are increasingly held accountable for many kinds of outcomes, including increased attention to the relationship between professionalism and clinical outcomes.
- There is a rise in safety literature and new attention to how cultures foster “normalized deviance” (maladaptive behavior that has become usual practice).
- There are trends toward deprofessionalization: as the authority and autonomy of the medical profession changes, professionalism will be impacted.

Conclusions

The assessment of professionalism remains a challenge of significant interest around the world. The research base continues to grow, and it is heartening that half of all scientific publications and 30% of publications of any form on the assessment of professionalism engaged with the original 2011 IWG report. It seems our calls for more research in the areas of cultural and linguistic diversity captured the beginning of a trend. No longer are these marginal concepts. In fact, this is now a major focus in writing and research about professionalism. There are 34 new articles exploring the topic of professionalism in different linguistic and cultural contexts, whereas in 2011 we could find only 2.

Similarly, there is much more written about institutional level considerations in professionalism, drawing in related concepts such as the hidden curriculum, professional power hierarchies, and political-economic factors. This broadened perspective shows that focusing only on individual characteristics is simplistic and deflects attention from problematic contextual and systems level issues. There has also been an evolution in the sophistication of the research generally, with many authors now employing well-articulated theoretical frameworks, epistemological clarity and demonstrating the influence of the work of researchers in other parts of the world. In other words, the research domain is maturing.

On the other hand, it is interesting and troubling to find persistent blind spots: that patient perspectives on the assessment of professionalism and the clash of individual and institutional values have not been taken up in research to any degree. We have no clear understanding of why this is the case, though in discussion groups it was speculated that professionalism may be a more profession-centric concept than one concerned with patient perspectives. That said, other domains of health care such as quality improvement and patient safety have made great strides in incorporating the patient voice. It is unfortunate that there is not more cross-talk between these fields (Wong and Ginsburg 2017). Beyond these areas requiring attention, our original recommendations appear to remain relevant and we find evidence that the conceptual framework we developed (professionalism as having three levels: individual, interpersonal and societal/institutional), as well as our epistemological map (positivist to constructivist), are of use to scholars in the field.

This follow-up report provides an overview of what has been accomplished in the international community since the release of our 2011 IWG report and we hope it will serve as a helpful companion to the original recommendations.

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Notes on contributors

Brian Hodges, MD, PhD, Wilson Centre for Research in Medical Education, University Health Network and Faculty of Medicine, University of Toronto, Canada.

Robert Paul, MBA, PhD, Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, Canada; Wilson Centre for Research in Medical Education, University Health Network and University of Toronto, Canada.

Shiphra Ginsburg, MD, PhD, Department of Medicine, Mount Sinai Hospital, University of Toronto, Toronto, Canada; Wilson Centre for Research in Medical Education, University Health Network and University of Toronto, Canada.

ORCID

Brian Hodges <https://orcid.org/0000-0003-4168-2725>

Shiphra Ginsburg <https://orcid.org/0000-0002-4595-6650>

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