



episode 8 (2018 August) *The Republic of Letters, and the Invisible College*

Heather: Hello everyone! Welcome to the eighth episode of the RASC 150 History Podcast! It's early Fall, which must mean it's time to catch and release the August episode. And we begin by begging your indulgence for the disruption to our regularly scheduled programming, but circumstances intervened. First, Randall escaped up a mountain because of some telescope or other, resulting in a scarcity of opportunities for spatial convergence among the three of us, compounded by bothersome obstructions to our efforts at temporal coordination, and then we encountered this, that, and the other—well, suffice it to say that it is only now that we've been able to rematerialize before our microphones to recommence production. And we're glad to be back with you, as together we resume our exploration of the fascinating history of the longest-lived astronomical society in Canada. Oh, I nearly forgot the introductions: my name is Heather Laird, I am a Director of The Royal Astronomical Society of Canada, and my co-host is the RASC Archivist, Randall Rosenfeld. Say hello, Randall!

Randall: [some mumbled greeting, or other].

Heather: So, where are we?

Randall: Well, I'm here and you're there... Oh, I see what you mean! In this episode we focus on a particularly compelling conception of astronomy as a collective, convivial, and communicative activity, a conception which arose and flourished in the early-modern world, and was known as the *Republic of Letters*. Its effects can be traced in the present, although many amateurs and professionals are unaware of the wider context of the informal and formal connections which contribute to making modern astronomy what it is.

Heather: Haven't we dealt with some of the social, or clubbable aspects of astronomy in previous episodes on our past? I suppose we could hardly do otherwise, given that this is a podcast series celebrating a century and a half of organized astronomy in Canada!

Randall: Yes, but now were moving the small-‘s’ societal aspect to centre stage. An awareness of how our ancestors conceived of their astronomical relationships, and furthered astronomy through them, could potentially benefit us now, in how we think about and construct our astronomical communities.

Heather: Okay; what is *The Republic of Letters*? I’ve heard of it, but didn’t think it included us.

Randall: Ah, it does indeed, and did from the start. I couldn’t do better than to quote Ruth Whelan—she’s an expert on Pierre Bayle, the author of the epochal *Various Thoughts on the Occasion of a Comet* (namely the Great Comet of 1680), who called his periodical *News from the Republic of Letters*. Whelan remarks of the Republic of letters that: [quote] “*The expression was used...to refer to the shared pursuit of knowledge for the common good, and it never lost this primary meaning, although it was invested over time with other meanings and symbolic powers of representation... Scholars such as Erasmus also thought in these terms, seeing themselves as citizens of the world...and members of the respublica litteraria, which united all like-minded people everywhere, past, present, and future. The Republic of Letters was, then, a conceptual space defined in terms of cosmopolitanism and universality... It was, however, also an actual space defined by a common language, Latin (the language of education in this period), networks of communication, and cooperative enterprise. Although scholars did travel between different centers of learning and acted as vectors of information, communication was for the most part by correspondence*” [end quote].

Heather: Hey! A lot of that (apart from the Latin) seems really modern; knowledge was pursued in a barrier-free environment for the good of everyone, there was a sense of inclusive shared enterprise, and technologies of communication were vital in ensuring the continued contact of scientific citizens. It’s a very attractive concept to anyone who prefers the spirit of disinterested pure research to the other kind, who believes in the benefits of research teams drawn from different labs, the power of citizen science, and the open acknowledgement of a connection joining the efforts of past, present, and future investigators.

Randall: Of course, it’s an idealized image of the Republic of Letters, and Whelan does report that reality could and frequently did fall short of the ideal, as with all

human institutions and relations. Barriers to the flow of information could be erected and access to materials encountered, the active participants were more often than not from a narrower group than the ideal suggested, and local rivalries, nationalisms, jealousies, and the pursuit of advantage marred the enterprise. Yet the ideal was resilient, and remained attractive. The ideal was stated regularly enough, and with conviction, that it clearly meant something significant to those involved, and played a role in the civil conduct of science—in fact, it was the civilized medium for the progress of knowledge.

Heather: I'd be interested in hearing what contemporaries in, say, the seventeenth century had to say about the concept.

Randall: Fair enough. It would be nice to be able to present a survey of early-modern opinion on the Republic of Letters, but our available time would hardly permit it. Instead, I opt we spend a bit of time with an intriguing, and unexpected source.

Heather: This better be good...

Randall: Dom Bonaventure d'Argonne was a seventeenth-century Carthusian monk, a contemporary of the founders and first staff of the royal observatories at Paris, and Greenwich. The Carthusians, by the way, were a monastic order known for their austerity, and, on the whole, never seemed to be in much need of reform since their eleventh-century foundation. Towards the end of his life Dom Bonaventure published an extensive and entertaining collection of essays of literary criticism, one of which was devoted to the Republic of Letters. It's one of my favourite texts on the subject, and it's worth quoting *in extenso*. He begins rather conventionally with a biblical origin story, but then it gets interesting. Heather, if you may:

Heather: [quote] *“The Republic of Letters is very ancient. It seems that this Republic existed before the deluge, on the testimony of the columns mentioned by Josephus, on which all the principles of all the sciences were engraved. At least one knows not to deny that soon after this great catastrophe, the sciences neither blossomed forth in the world, nor were much advanced.*

The Republic has never been greater, more populous, more free, nor more glorious than it is now. It extends throughout the Earth, and is comprised of people from all nations, of every condition, of all ages, and of all sexes—women are no more excluded than the young. All kinds of languages are spoken there, living and dead. The sciences are joined to the arts, and manual works have their place; but religion is not consistent, and the morals, as in all the other Republics, are a mix of the good and the bad. One finds piety, and licentiousness” [end quote].

Randall: Yes, you heard that right. A seventeenth-century eremitical monastic of a formidable order states that the Republic of Letters is flourishing in his day as it never has previously, and that the institution is inclusive, pluralistic, open, and free. Age, gender, nationality, and language are irrelevant to membership. To me, at any rate, it sounds like a socially paradisiacal conceptual space in which to conduct one’s learned work, scientific and otherwise. And, for those of our listeners who are wondering, Dom Bonaventure’s characterization of the Republic of Letters is in agreement with much of the opinion of his day.

Heather: It is also, surprisingly and gratifyingly, “Canadian” in flavour—a world of people of multicultural origins making common cause to better understand their world. It is surely a coincidence that the aspirationally enlightened Canadian ideal of tolerance and openness is so close to this seventeenth-century monk’s description of the Republic of Letters.

Randall: Dom Bonaventure goes on to talk mainly of the abuses in that conceptual space. It’s amusing enough in parts to merit quotation; so I’ll quote: “...*There are sects there in great number, and new ones form every day. The entire state is divided between philosophers, doctors, theologians, jurists, historians, astronomers, orators, grammarians, and poets, who each have their particular laws.*

Justice is administered there by the critics, often with more severity than judgement. The populace has much to endure from these people, chiefly when they are punctilious and visionary. They reduce, cut, or add as it pleases them; and no author can answer for his destiny when once he falls into their hands. When they emerge they are so cruelly ill-treated and mutilated, that they lose their sense and reason. The trouble which the critics give to authors to make them speak the truth,

ordinarily serves only to make the authors speak contrary to their intent, and their conscience.

Shame is the greatest torture for those culpable, and, in this land, the loss of one's reputation is the loss of life...The Public distributes the glory—but often with much blindness, and too much haste. This causes great complaints, and excites unfortunate murmurings in the Republic.

Page | 5

The dominant vices of this state are presumption, vanity, arrogance, jealousy, and gossiping. There reigns also a nearly incurable illness, which is called Fame, which desolates the entire country.

This Republic also has the misfortune to be infected with plagiarists, who are a species of bandit despoiling the countrymen. The corrupters of books and forgers, all very dangerous people, do not lack rhapsodic schemers, and worthless fortune tellers entirely dependent on the public...

I will not treat of the debauched of the Republic, those who have engineered their own untimely demise through quarrelsomeness of spirit, and excess of study; nor of certain ones who are so delicate that they know not how to endure anything, nor of visionaries who revel in hollow fancies, and false systems. All this ought to be assumed in a Republic as vast as the of the Republic of Letters, which all sorts of people are permitted to reach, and to inhabit in imagination” [end quote].

Heather: Okay, I like the fact that this seventeenth-century monk would have no problem with me participating in the astronomical part of the learned world. I didn't expect that. But he's as temporally distant from the people who founded our Society as we are, only in the opposite direction. What's the connection?

Randall: The connection is the Republic of Letters. The Royal Academy of Sciences in Paris and the Royal Society of London were founded in Dom Bonaventure's lifetime, and they were certainly considered part of the Republic of Letters well into the nineteenth century. The astronomers in those societies were popularly seen as members of the Republic of Letters, as in this extract from a topographical guide to London: [quote] "*Whilst he [Halley] continued at the university, his father spared no expense to encourage the happy genius of his son, and purchased for him a very curious apparatus of instruments; which encouraged*

him to proceed to his studies with such indefatigable diligence, that the Republic of Letters had soon an instance of what might be hoped for... In his nineteenth year, he published 'A direct and geometrical Method of finding the Aphelia and Eccentricity of the Planets'" [close quote].

Heather: So, when separate Astronomical societies such as the Royal Astronomical Society, and the RASC were founded in the nineteenth century, they were modelled on the prestigious seventeenth-century societies?

Randall: Yes!

Heather: And, following those precedents, it was expected that the astronomical societies would have a place in the Republic of Letters as well?

Randall: Yes!

Heather: That makes sense. Ah, I see the implications. In creating what was to become the RASC, they were entering the Republic of Letters, with their own moderately egalitarian association for the mutual pursuit of astronomy. Half of our Society's founders were of the middle class, but the other half were firmly of the working class. The Toronto Astronomical Club was a space in which they could all meet on an equal footing in astronomy, whereas they wouldn't be able to do so in other social situations, or at least the class divisions, while still present in the Astronomical Club, were moderated by a meritocracy of astronomical ability. The attraction of that to someone like Andrew Elvins the tailor would be considerable. This was a republic to which subjects of a constitutional monarchy could safely belong. Interesting. But they were still all white males of the British Empire. Dom Bonaventure's description of the Republic of Letters seems more egalitarian.

Randall: And so it was. But we're dealing with a constantly shifting relationship between ideals, and reality. In the late 1880s and early 1890s the RASC encouraged female participation, at least. Another aspect of the Republic of Letters in those years is revealed in the Society's seeking after astronomical patronage. One of the continuing great technologies for learned communication was the letter. And, a duty of citizenship in the Republic of Letters was the obligation to communicate. Individual members of the Republic wrote letters to each other, influential members built up significant and extensive epistolary networks, and scientific

societies were letter-writing entities as well. In the RASC of the present, the National Secretary is an officer elected from within the ranks of the Board of Directors. That position descends from two officers of the 1890s, the Corresponding-Secretary, and the Recording-Secretary. Our office of Corresponding-Secretary took its inspiration from the office of Foreign Secretary of the Royal Astronomical Society, which originated in the 1820s when John Herschel held it and our sister society was yet to become “Royal”. All of these were modelled one way or the other on some of the duties of the Secretaries of the Royal Society of London for the Improvement of Natural Knowledge—and, lo and behold, we’re back to the seventeenth century!

Heather: I think you could likely go entirely unnoticed there.

Randall: Why, thank you!

The Corresponding-Secretary reporting on the letters received was a regular and interesting part of our meetings in the 1890s. In those years it was decided to institute several classes of honorary membership. Letters went out to prominent members of the astronomical community, whose association would bring lustre to the Society—should they accept the honour. We have copies of some of the letters we sent, but even better, we have originals of the letters received. We don’t appear to have been turned down, or not often, at any rate.

Heather: Hey, let me see that file! This is awesome! These things look like what I imagine history looks and feels like. Here's a letter from Agnes Mary Clerke in August of 1892, thanking us for fifty offprints of her paper on Nova Aurigae, and compliments us on our editing. I see from our minutes she wrote in 1891: [quote] *"I have great pleasure in accepting the flattering offer which you have been so kind to transmit to me. I shall consider it a high honour to be affiliated, in the manner you propose, to the Astronomical and Physical Society of Toronto, which already gives promise of being a powerful agency for the promotion of astronomical activity in your great country"* [end quote]. She's so cool! And this is a letter from George Ellery Hale writing from Palermo in 1894, gracefully accepting his election to honorary membership. And another communication from him two years later thanking us for our *Transactions*, and congratulating us on our "[quote] *substantial evidence of...activity and progress*" [end quote]. OMG! This one's

from the dynamicist, George Darwin, Charles Darwin's son, stating in 1894: "[quote] *I feel highly honoured by my election to the Astronomical Society of Toronto. I suppose my description should be George Howard Darwin, M.A., Plumian Professor of Astronomy & Fellow of Trinity College Cambridge ...F.R.S., F.R.A.S. Of course I belong to a few other Societies, but they are not worth putting down*" [end quote]. That's so funny, because in reality we'd be one of those "other societies"! And there's a raft of letters from James Edward Keeler from the same year, thanking us for his election to our ranks, and others offering us papers for our *Transactions*, and comments on the same. Here's a 1899 postcard from Her Majesty's astronomer at the Cape of Good Hope, David Gill—I mean Sir David Gill—no, wait, he wasn't knighted yet—thanking us for the donation of our *Transactions*! There're so many of these! And so many of the honorary members then, people famous in the astronomical world of the time, were happy to send us their work to publish.

Randall: The obligations went both ways. We wished to honour them because of their outstanding contributions to astronomy, and the positions they held in the astronomical universe, and they reciprocated by accepting the honours for what they were, and sending us work to publish. We weren't all that important in the astronomical world of the 1890s, yet what impresses me is that these people were willing to take the time and effort to write to us, and lend their support. And it was because they, and our predecessors were citizens of the Republic of Letters.

International cooperation in professional astronomical research happens today because of the centuries-long precedent of the Republic of Letters. It is also sometimes a factor in the conduct of amateur astronomy. The ideal characteristics of the Republic of Letters—tolerant inclusiveness, diversity, openness, and meritocracy—are worth remembering, and cultivating. Particularly in the present world.

Heather: Thanks to everyone who tuned in, and we hope you enjoyed this podcast. If you have any questions, please visit www.rasc.ca/rasc-2018-podcasts for contact details.

Our next podcast is also scheduled for this month, and is titled “Gender, 'Race', and Astronomy”—a difficult, but necessary discussion.

Our sound engineer is Chelsea Body, and our theme music is by Eric Svilpis.