

The Queer History of Physics

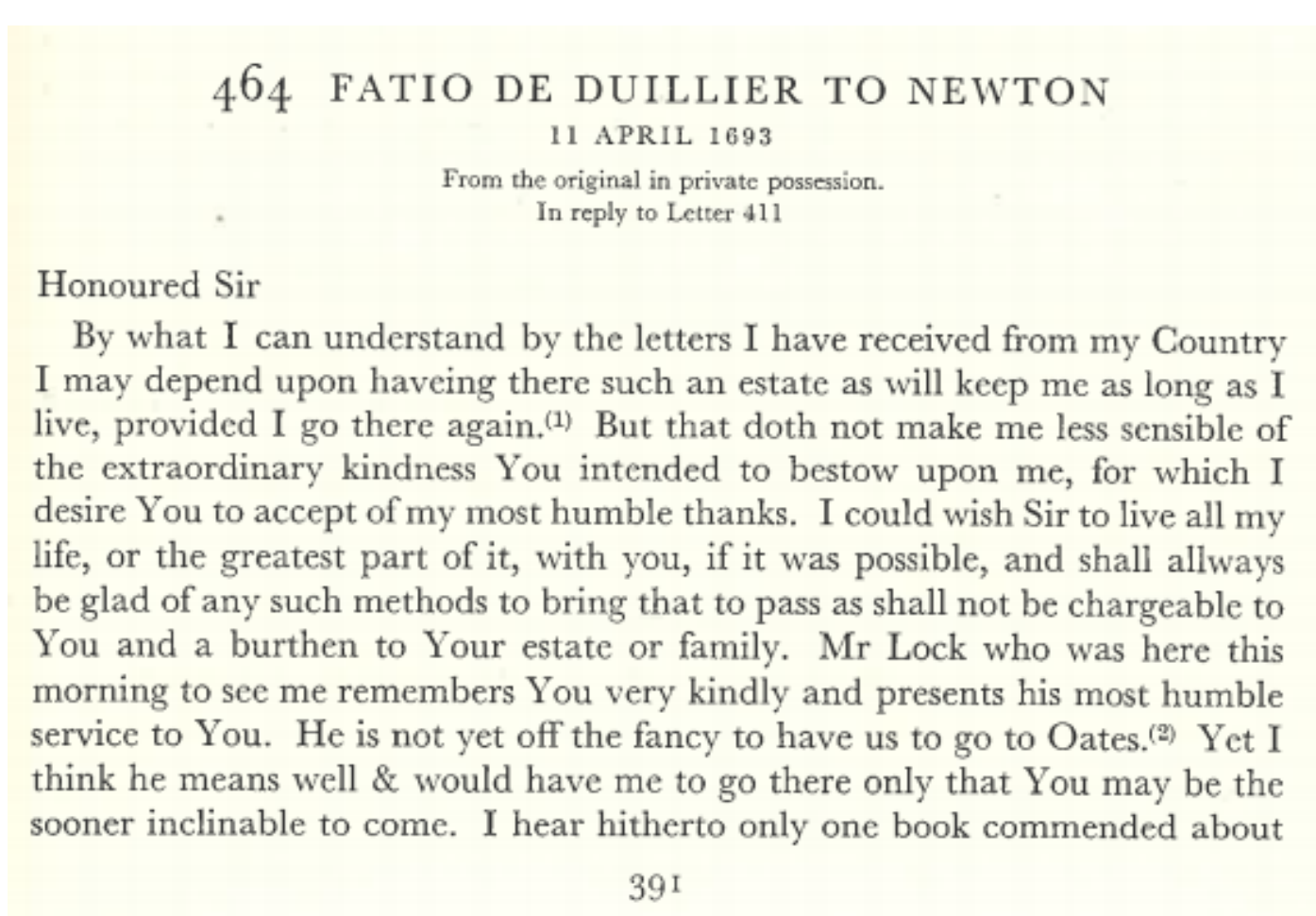
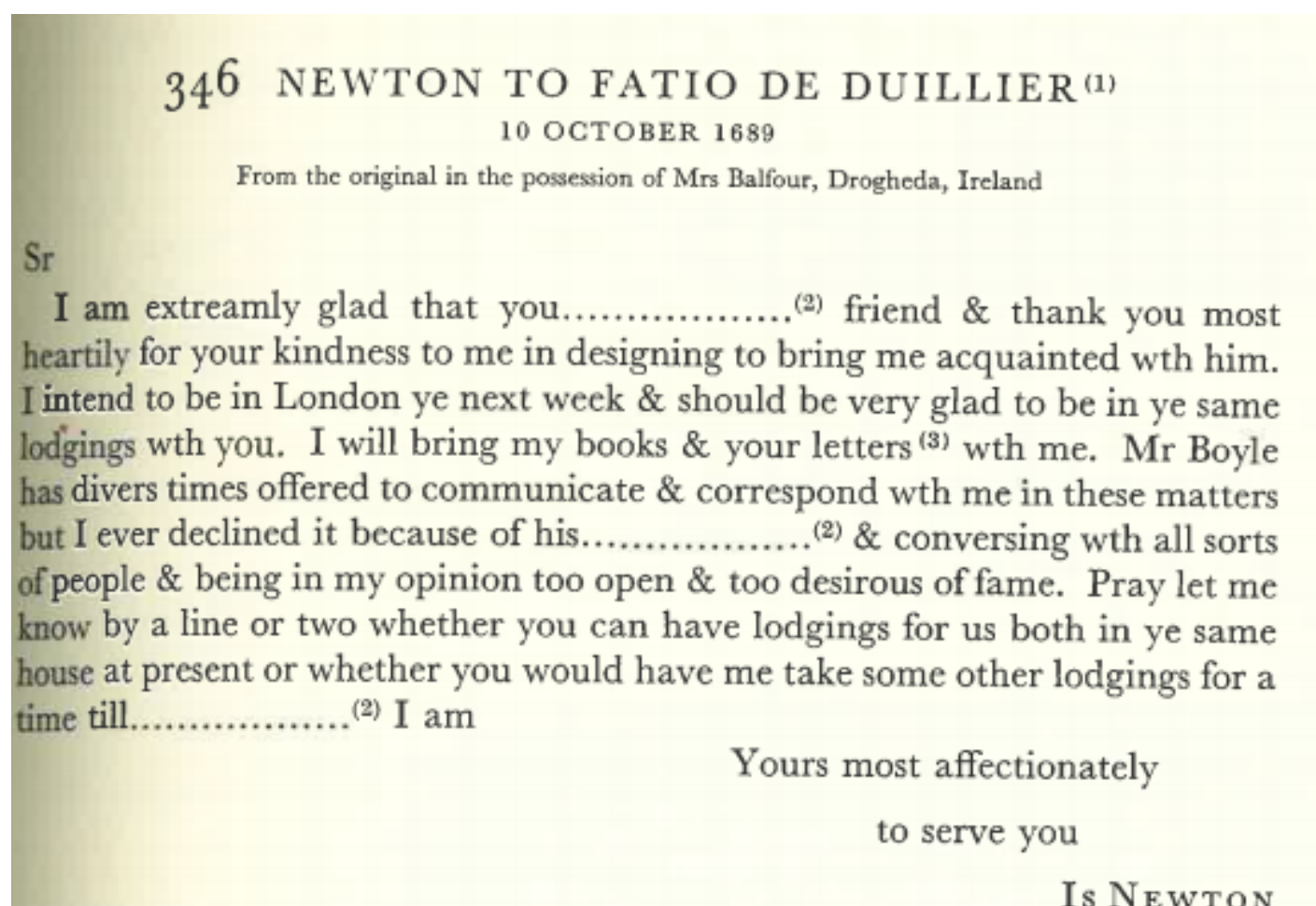
Eliot Jane Walton, QueersInScience (QIS)

Queer(ing) Historical Research

- Sexuality is **discursively constructed**: it is composed of an individual's attraction, their relationship to that attraction and the social and cultural context.
- Gender is **socially constructed** and is used for social organisation: it is a social, psychological and cultural state of being.

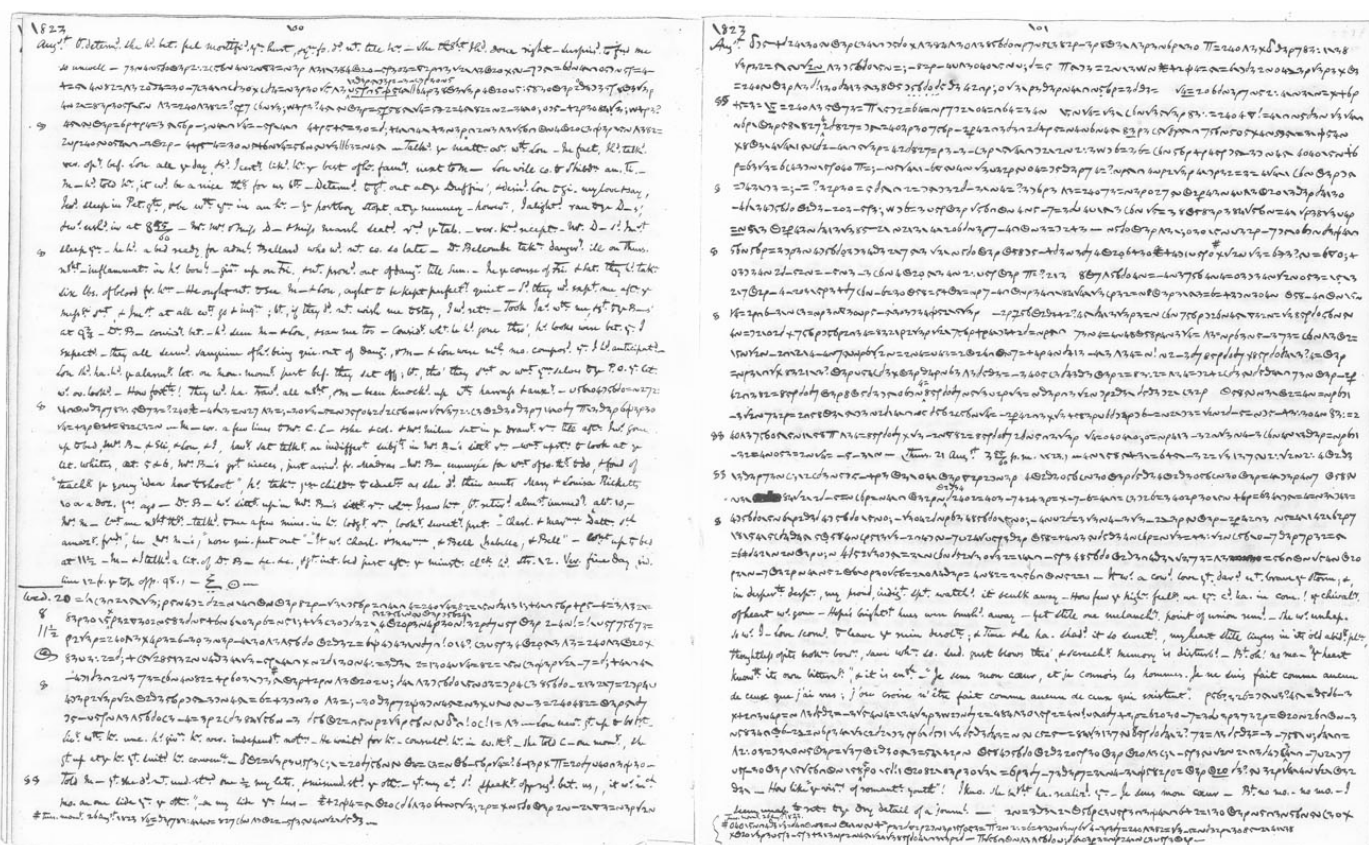


- Objects, spaces, behaviours and social, legal and economic roles acquire gendered meanings through **performative actions**.
- **Performative Theory** describes gender as the product of culturally specific rituals and practices which are maintained over time.
- It is generally inappropriate to apply contemporary labels to the past.
- As an historical category, **queerness** requires (re)thinking how gender and sexuality vary over time, space and culture.
- **Queerness** may be historically understood as sustained expressions of gender and sexuality which are **subversive with respect to their historical context**.
- **Data** are therefore **limited to observable expressions of subversion**.



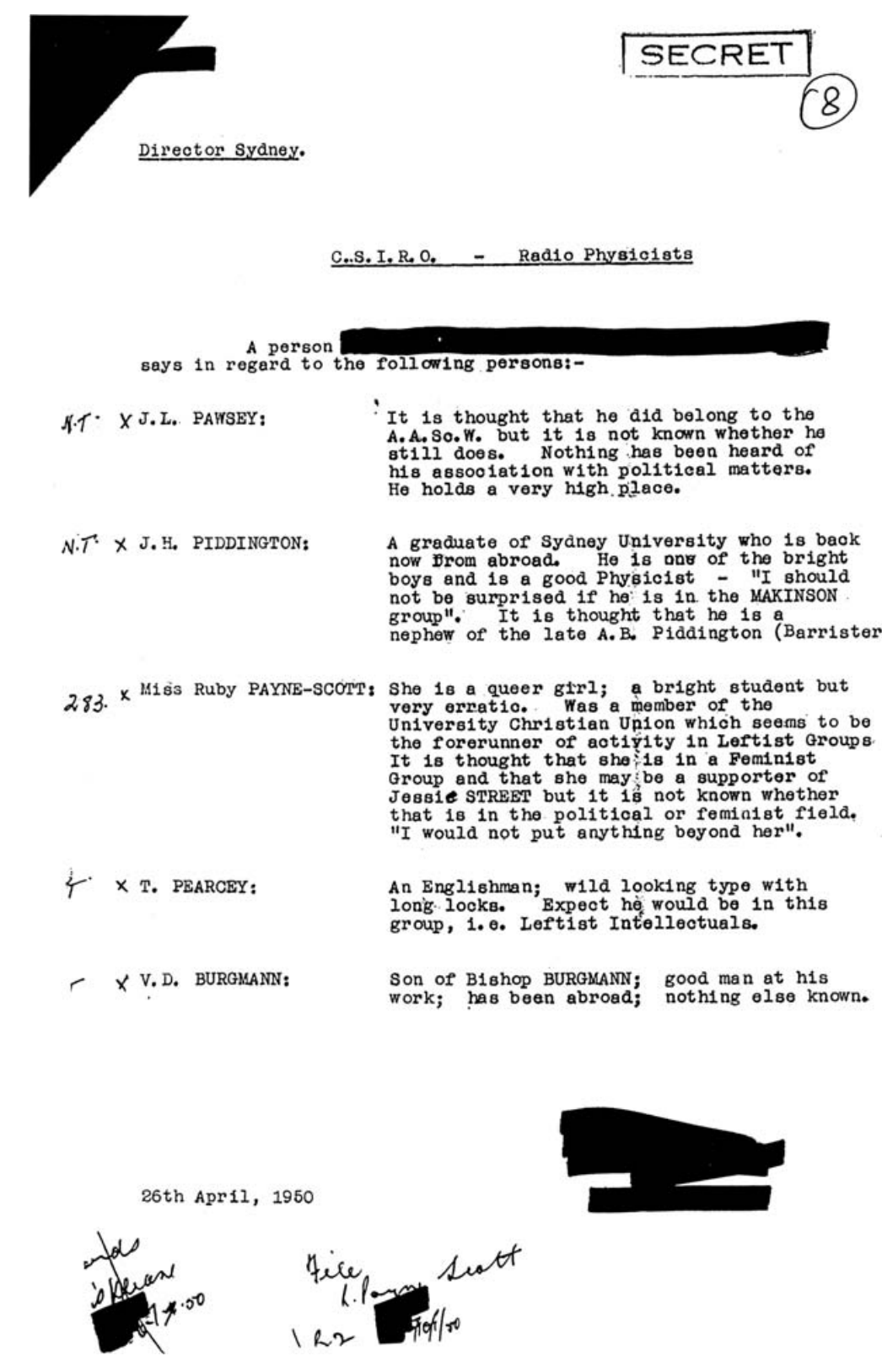
Gaps in the Record

- The data available on historical queer people are **sparse**.
- Major sources of evidence for queerness are **police and court documents** as well as **newspapers and journals**.
- These focus on male homosexuality since it was **explicitly illegal and publicly scandalous**.
- **Private writings** furnish some data on **female homosexuality**, but are difficult to access.
- **Scientists** tended to be **historically wealthy and privileged**, leaving more records.



Queer Superstar: Ruby Payne-Scott (1912-1981)

- **Ruby Payne-Scott** was a **pioneering Australian radio astronomer** who worked on solar astronomy and military radars.
- Ruby **discovered three of the five categories of solar bursts** originating in the solar corona in 1945 to 1947 and made major contributions to radio astronomy techniques.
- Her most significant contribution in this period was the **development of the aperture synthesis technique** with her collaborators.
- Martin Ryle and Antony Hewish shared the **1974 Nobel prize**, awarded for **Jocelyn Bell's discovery of Pulsars** which used the method pioneered by Ruby and her collaborators.
- She was married in 1944 and concealed it until 1950, knowing she would be **forced to resign** if discovered.
- Her marriage was discovered in 1950, she was demoted and, in **1951, she resigned**. She was pregnant and had miscarried a few years previously.



- **Ruby eschewed gendered conventions**: when women were expected to wear skirts to work, Ruby wearing shorts replied: **"Well, this is absurd."**
- At a meeting discussing men being allowed to smoke and women not, **Ruby attended smoking a cigarette**.
- Some of Ruby's colleagues called her **"Red Ruby"** for her socialist, feminist and radical politics.
- A secret CSIRO memorandum described Ruby as **"queer girl; a bright student but erratic ... I would not put anything past her"**.

Modern Context

- **Recognising queer contributions** to the history of science is essential to the belonging of the queer community today.
- **Posthumous recognition** helps to **correct the historical injustice** and erasure of queer scientists.
- Research must be respectful of historical self-identification and of ethical considerations around such information.
- **Queerness in science is far more common today** owing to the public funding of science and more universal and accessible education.
- Even with limited data, it is clear that **queer people made important contributions to science** from the beginning.



QueersInScience and Collaborations

QueersInScience is a community-based organisation building community and support for queer/LGBTQIA+ people in STEM in Australia. If you are interested in our **seminars and advocacy** work contact queersin-scienceau@gmail.com. QIS received grant funding from the **Theo Murphy (Australia) Initiative administered by the Australian Academy of Science**.

