Title 5. Do we need custodians of knowledge? Discuss with reference to **two** areas of knowledge.

Word count: 1591

Our quest for truth and understanding is often constrained by the methods with which we obtain knowledge and interact with it. This calls into question the need for custodians of knowledge—individuals, entities, or frameworks within an area of knowledge (AOK)—that work to shape new knowledge, preserve existing knowledge, or regulate how knowers interact with knowledge. The "need" for a custodian will be explored through the lens that knowledge will either be unverified, inadequately disseminated, or inappropriately established without their existence. This essay will explore how the role of these custodians and will demonstrate that their purpose determines their necessity in the **natural sciences** and **history**.

The natural sciences, through the implementation of the rigorous scientific method, investigate various facets of the physical world from galaxies to cells (Guo 69). In the natural sciences, custodians of knowledge are needed when they work to ensure the functioning of and adherence to the scientific method. This upholds the integrity and credibility of the knowledge that is produced. In 1937, Sulfanilamide—an antibiotic—was dissolved in diethylene glycol, a poisonous compound, by the S.E. Massengill company to meet a rise in demand for syrup antibiotics. The resulting solution, *Elixir Sulfanilamide,* was not tested for its safety due to the absence of laws that required so, resulting in the death of over one hundred people (Ballentine). It was this incident that resulted in the imposition of the 1938 Federal Food, Drug, and Cosmetic Act, giving more power to the Food and Drug Administration (FDA) (Ballentine). Before this act, the FDA had little power, resulting in produced knowledge not being subject to the same

level of scrutiny that it would have otherwise gone through. If the FDA had the power to enact legislation, it would have worked to ensure that the scientific method is followed by regulating antibiotics through safety tests. In the natural sciences, custodians, in the form of regulatory bodies, work to ensure that rules, principles, and ethical practices are not only established but also followed consistently through the facilitation of the scientific method. This prevents an erosion of trust in science, thus showcasing the need for custodians of knowledge.

However, there are instances when the role of a knowledge custodian is relegated to an individual; this can limit the functioning of the scientific method through the formation of cognitive biases, thereby resulting in a knowledge custodian being counter-productive to the production of new scientific knowledge. According to Rupert Sheldrake, one of the ten dogmas of science is that the laws of nature are fixed (After Skool). Thus, the scientific community must follow a universalist approach wherein knowledge claims in science are evaluated only based on the claim itself and not the knower making the claim (Stemwedel). However, the nature of the scientific community is such that more credibility is often bestowed upon established and popular scientists, giving them the autonomy of a custodian. This leaves the scientific community vulnerable to the cognitive biases formed by these scientists through their resistance to new knowledge. In 1863, Lord Kelvin, in his paper, "The Secular Cooling of the Earth", used thermodynamic models to estimate the age of the Earth (Stinner and Teichmann). Later claims by less-popular geologists which disproved Lord Kelvin's estimates were subsequently rejected by the scientific community due to the authoritative stance and reputation of Lord Kelvin (Ammon). These new estimates were later found to be correct. The line that separates a scientist from "right" and "wrong" is the ability of the scientific method to falsify. However, this is

undermined when the universalist nature of science is no longer followed and the scientific method's ability to disprove knowledge claims is hindered. The ethos of science is that of a collective endeavour: scientists around the world collaborate, create, and scrutinise knowledge within the context of the scientific method. Although scientists take this method as an imperative, the formation of bias is inevitable when the power of a custodian is given to a single individual. Due to the robust and self-correcting nature of the scientific method, the framework itself can act as a knowledge custodian by shaping new knowledge through the evaluation of knowledge claims in the context of accepted theories and laws. Thus, custodians of knowledge are not needed in the sciences when the role is relegated to a single individual. Instead, when scientists work together and facilitate the scientific method, the universality of science is promoted, allowing for new knowledge to be produced more effectively. Therefore, the absence of a custodian of knowledge is impossible in the sciences and thus knowledge claims cannot be unverified or inappropriately established.

The role of a historian is to apply the historical method by drawing interpretations from evidence to understand historical events, cultures, and knowledge systems; they exert significant influence in shaping our knowledge of the past and preserving the knowledge of what happened (Carrier). History is inherently subjective and therefore the influence of historians is dependent upon their ability to approach this subjectivity with as objective of a lens as possible. When they do this by considering a pluralist approach in their gathering and interpretation of evidence, they play a crucial role in preserving the memory of society. This makes custodians of knowledge necessary as they provide a more multifaceted view of historical events, thereby preventing historical amnesia. In 1995, a Truth and Reconciliation Commission (TRC) was created to uncover the

magnitude of human rights violations committed during apartheid. One unique aspect of the TRC was that hearings were made as objective as possible by hearing both victims and perpetrators (Tutu). The multiplicity of perspectives contributed towards the elimination of bias as it avoided propagating a single narrative. Through open hearings, a final report, and a reparations policy, the TRC successfully archived the horrors of the apartheid. This prevents historical amnesia: future generations will not forget the suffering that many faced at the hands of the apartheid state but neither will they forget that there were stakeholders who benefited from the apartheid: White South Africans (CSVR). By considering multiple perspectives, the knowledge archived by the TRC can be extrapolated to discuss larger ideas of oppression and human rights abuse and how these pertain to the African context. It can also be used to understand how certain groups benefit from the disenfranchisement of others. The TRC helped start a conversation on change, showing how events in history are not necessarily constrained by the period in which they occur. The archived reports also allow people from other cultures to sympathise and reflect on the events that occurred, thus fostering cross-cultural perspectives by showing ideas like peace and freedom transcend geographical borders. Thus, custodians of knowledge are necessary when they help preserve historical knowledge as objectively as possible.

Unlike the natural sciences where objectivity is essential, it can only be said to be desirable in history as biases propagate right from the sources historians interpret to the historian themselves. One such example is when historians prioritise certain knowledge systems over others, resulting in the marginalisation of other knowledge systems. When this happens, custodians are detrimental to the preservation of knowledge and thus not needed. Diego de Landa, a Franciscan bishop, was tasked with studying and keeping an account of Mayan traditions and culture. In

1562, after finding traces of Pagan rituals in a cave, he ordered the burning of the Mayan artifacts he was tasked with preserving ("Diego de Landa"). Diego de Landa was a Franciscan bishop and therefore his relation to church forced him prioritise the Franciscan Christian knowledge system, making him an ineffective choice to carry out the role of a historian. By prioritising his knowledge system over that of the indigenous Mayans, he destroyed artifacts that contained information about Mayan culture, values, and traditions, making it difficult for modern historians to piece together the depth of the Mayan knowledge system. Thus, the need for custodians depends on their ability to transcend cultural predilections. They must uphold principles of objectivity, neutrality, and respect for traditions within different knowledge systems. When custodians do not do so, they are not needed as they fail the role of a historian.

Ultimately, custodians of knowledge can play both beneficial and detrimental roles in the natural sciences and history as they have the power to contribute and hinder the development of knowledge. The need for a custodian depends on the extent to which they can maintain the integrity of the knowledge produced in each AOK and the extent to which they can facilitate the framework (the scientific and historical method) through which knowledge is produced. Both the natural sciences and history call for objectivity in the production of knowledge. Although objectivity is more easily achievable in the natural sciences due to falsification, it does not excuse the historian from letting their biases take reign. In both the sciences and history, there is a need for collaboration and perspectives. When the role of a custodian is bestowed to a single individual, it was shown that it is easy for their biases to hinder the production of knowledge and therefore custodians are not needed. However, custodians of knowledge can be useful and therefore are deemed necessary when they work towards establishing the integrity of knowledge

produced. In the sciences, the scientific method ensures that the knowledge produced is as true as possible. In history, when custodians of knowledge present as objective of a view as possible, it allows future historians to draw upon varying interpretations of the event based on their context. This leads to a more holistic understanding of the historical event. In the event where objectivity is possible, custodians of knowledge can be useful and are thus needed.

Works Cited

After Skool. 'Exposing Scientific Dogmas - Banned TED Talk - Rupert Sheldrake'. *Youtube*, 17 Jan. 2023, https://www.youtube.com/watch?v=sF03FN37i5w.

Ammon, Charles. 'The Age of the Earth'. *Earth, Our Environment - Class Notes*, Jan. 1997, http://eqseis.geosc.psu.edu/cammon/HTML/Classes/PhysicalGeology/Notes/SciUniversality/P07.html.

Ballentine, Carol. 'Sulfanilamide Disaster'. *FDA Consumer Magazine*, June 1981.

Carrier, Richard C. 'The Function of the Historian in Society'. *The History Teacher*, vol. 35, no. 4, Aug. 2002, p. 519. *DOI.org (Crossref)*, https://doi.org/10.2307/1512473.

CSVR. *CSVR | The TRC and Apartheid Beneficiaries in a New Dispensation*. https://www.csvr.org.za/the-trc-and-apartheid-beneficiaries-in-a-new-dispensation/. Accessed 22 Feb. 2024.

'Diego de Landa'. *Britannica*, https://www.britannica.com/biography/Diego-de-Landa. Accessed 25 Dec. 2023.

Guo, Rongxing. *Cross-Border Resource Management*. Elsevier, 2018. *DOI.org (Crossref)*, https://doi.org/10.1016/C2016-0-04674-0. Accessed 22 Feb. 2024.

Stemwedel, Janet. *Scientific Credibility: Is It Who You Are, or How You Do It? - Scientific American Blog Network*. https://blogs.scientificamerican.com/doing-good-science/scientific-credibility-is-it-who-you-are-or-how-you-do-it/. Accessed 21 Feb. 2024.

Stinner, Art, and Jürgen Teichmann. 'Lord Kelvin and the Age-of-the-Earth Debate: A Dramatization'. *Kluwer Academic Publishers*, 2003, pp. 213–28.

Tutu, Desmond. *Truth and Reconciliation Commission, South Africa (TRC) | Britannica*. https://www.britannica.com/topic/Truth-and-Reconciliation-Commission-South-Africa. Accessed 22 Feb. 2024.