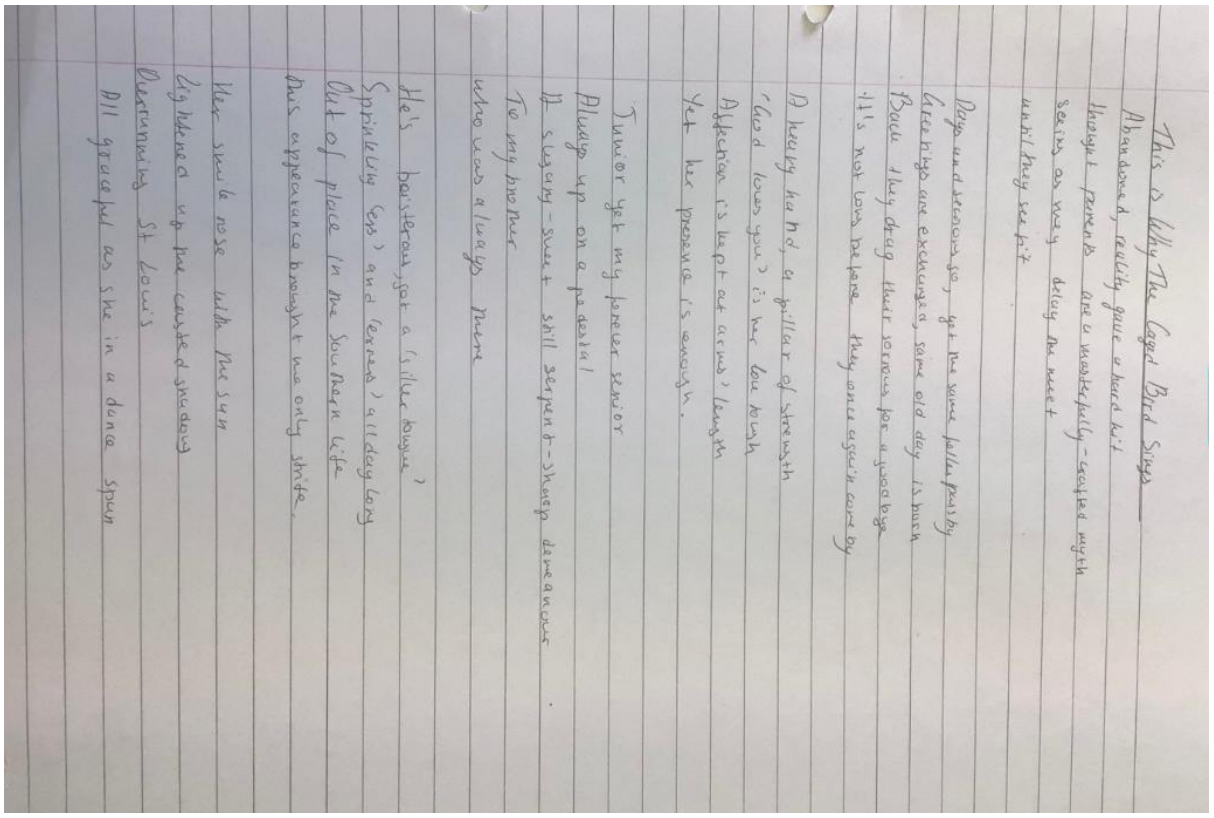
Are some types of knowledge less open to interpretation than others?



[1]

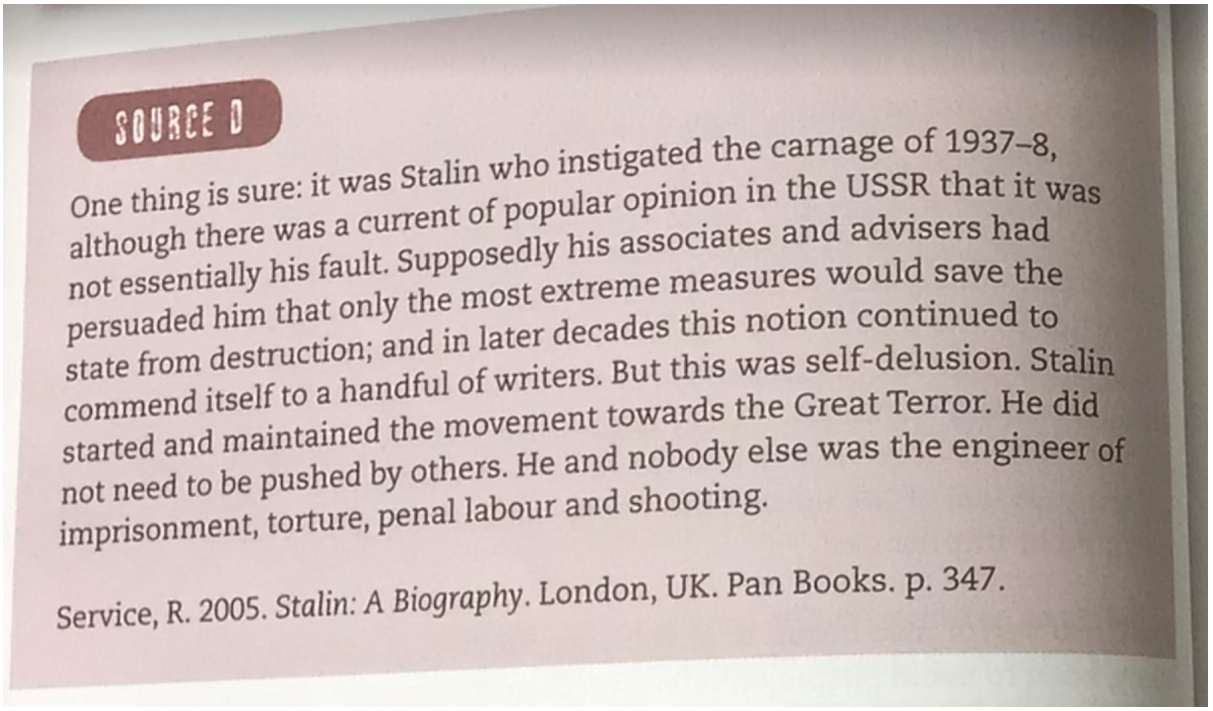
I wrote this poem for my English portfolio as a creative representation of my understanding of 'I Know Why the Caged Bird Sings', a book by Maya Angelou. The poem explores some of the most prominent chapters of the book for me personally and hence shows my own knowledge about this piece of literature. Therefore, the poem exhibits emotional knowledge, which is open to interpretation.

The poem links directly to the theme of language as literature uses language to convey knowledge. The aspects of the book which I have included in the poem are things which I have seen as central to the autobiography. This demonstrates the subjectivity of knowledge in literature as all readers bring their background when deriving meaning from literary pieces. The use of different language devices and techniques in literature delivers different messages to each person. Therefore, individuals will discover various connotations depending on their personal experiences and culture. This makes literature highly open to interpretation because there is often not one true meaning and it most often varies in accordance to how different people view it.

This poem adds another layer for interpretation depending on whether the person has read the book or not. As the book gives context for the knowledge included in the poem, a person who is not aware of the context would have a different interpretation to someone who does. Moreover, having the context of the book can make the poem less open for interpretation because it fixates the message to the plot of the autobiography. The framework created by that plot will contaminate the perception as that person would be aware of what each stanza links to in the book, whereas someone who has not read the book will not have that

[1] Picture from the author's private collection, 2021

restrictive framework and will have more freedom in their interpretation. This suggests that without the book context the poem is more open to interpretation.



SOURCE D

One thing is sure: it was Stalin who instigated the carnage of 1937–8, although there was a current of popular opinion in the USSR that it was not essentially his fault. Supposedly his associates and advisers had persuaded him that only the most extreme measures would save the state from destruction; and in later decades this notion continued to commend itself to a handful of writers. But this was self-delusion. Stalin started and maintained the movement towards the Great Terror. He did not need to be pushed by others. He and nobody else was the engineer of imprisonment, torture, penal labour and shooting.

Service, R. 2005. *Stalin: A Biography*. London, UK. Pan Books. p. 347.

[2]

This is a historical source, discussing terror in the USSR[3], which I read when doing research for my history Internal Assessment about the methods Stalin used to control the Soviet Union. It shows an interpretation of the carnage by R. Service, suggesting that despite history being 'factual', historians still have different opinions about events from the past.

The historical knowledge of this source should be objective because historians aim to find the truth about what happened in the past. Despite that, experts in the field still contradict each other even when looking at the same sources. Qualitative data sources, such as this one, can be looked at in different ways due to the subjective nature of language. This is evidenced by Service contradicting a different opinion, displaying how historians develop different arguments even when analysing the same data. It is hence suggested that history is subjective, however the facts involved in it, such as statistics and years, are not or at least should not be (The Soviet Union made up a lot of their production figures[4]) open to interpretation. Similarly to other fields of study such as maths and science, statistics in history are regarded highly because they are generally considered to be objective and not open to interpretation. Unfortunately, not every year of events in the past has been recorded, either due to the lack of ability or the lack of thought that it is necessary. Therefore, it is

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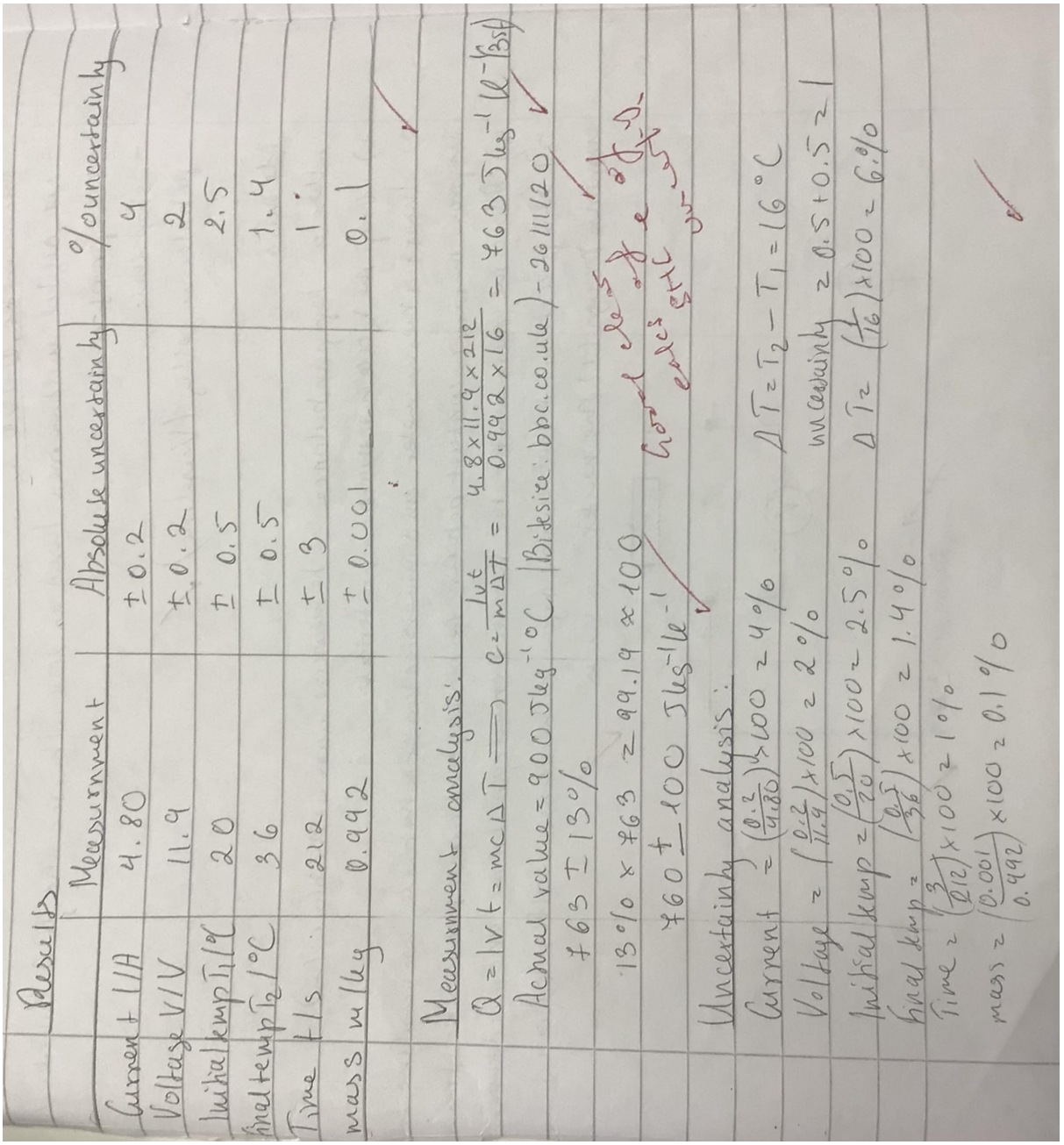
[2] Todd, Allan. History for the IB Diploma. The Soviet Union and Eastern Europe (1924-2000). Cambridge, Cambridge University Press, 2012.

[3] Union of Soviet Socialist Republics

[4] Harrison M., 7 November 1997, ' Soviet industrial production, 1928-1950: real growth, hidden inflation, and the 'unchanged prices of 1926/27 ', https://warwick.ac.uk/fac/soc/economics/staff/mharrison/public/realnyirost2001.pdf, accessed on 28/05/21

suggested that historians have to interpret qualitative data, both when there is and when there is not quantitative data to back it up. However, interpretations are restricted to the sources available, indicating that historians' views are still factual to an extent, despite there being contradictions between them. Hence, language in history is open to interpretation but not to the extent of language in literature.



Results

	Measurement	Absolute uncertainty	% uncertainty
Current I/A	4.80	±0.2	4
Voltage V/V	11.9	±0.2	2
Initial temp T_1/°C	20	± 0.5	2.5
final temp T_2/°C	36	± 0.5	1.4
Time t/s	212	± 3	1
mass m/kg	0.992	± 0.001	0.1

Measurement analysis:

$Q = IVt = mc\Delta T \Rightarrow c = \frac{IVt}{m\Delta T} = \frac{4.8 \times 11.9 \times 212}{0.992 \times 16} = 763\ Jkg^{-1}K^{-1}$ (3sf)

Actual value = 900 $Jkg^{-1}°C$ (Bitesize: bbc.co.uk) - 26/11/20

763 ± 13%

13% × 763 = 99.19 ≈ 100

760 ± 100 $JKg^{-1}K^{-1}$

Uncertainty analysis:

Current = $(\frac{0.2}{4.80}) \times 100 = 4\%$

$\Delta T = T_2 - T_1 = 16°C$

Voltage = $(\frac{0.2}{11.9}) \times 100 = 2\%$

uncertainty = 0.5 + 0.5 = 1

Initial temp = $(\frac{0.5}{20}) \times 100 = 2.5\%$

$\Delta T = (\frac{1}{16}) \times 100 = 6.9\%$

final temp = $(\frac{0.5}{36}) \times 100 = 1.4\%$

Time = $(\frac{3}{212}) \times 100 = 1\%$

mass = $(\frac{0.001}{0.992}) \times 100 = 0.1\%$

5

This is a data set and some calculations from a physics experiment I conducted in class. It contains knowledge of the specific heat capacity of aluminium obtained by using the electrical method. The collected data is clearly structured in the table and the calculations follow a particular formula to calculate the specific heat capacity.

[5] Picture from the author's private collection, 2021

The object clearly states the numerical data and what has been collected to find the specific heat capacity and is therefore not open to interpretation. Quantitative data is less open to interpretation than qualitative data because the language is confined in symbols and numbers. In qualitative data, language can be interpreted differently because the connotations of words are subjective as in literature. Quantitative data, on the other hand, uses symbols for variables which represent a very specific thing. They cannot be misinterpreted because not knowing their meaning only limits your knowledge, instead of giving room for interpretation. Numbers are also symbols that are not open to interpretation because they represent different quantities and cannot be anything other than that. This indicates that they are not open to interpretation the way language in qualitative data and literature is. Hence, it can be concluded that scientific and quantitative knowledge is less open to interpretation.

However, some variables have the same symbols or the symbols used vary from country to country. For example ‘d’ is used to represent distance, separation and thickness of a material[6]. For someone who is not as familiar with the origins of where an equation is derived from, it could be difficult to understand which usage of ‘d’ is implied. However, rather than being open to interpretation, not knowing the correct meaning of a symbol will only lead to misinterpretation and inaccuracy in usage of an equation or in an experiment. Therefore, in the science field language aims to not be open to interpretation because that would undermine the accuracy of the discipline.

Word count: 949

[6] Elert G.,1998-2021,”The Physics Hypertextbook”,https://physics.info/symbols/, accessed on: 07/05/21

Bibliography

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Pictures from the author's private collection, 2021