

A not entirely tongue in cheek metric for Art

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1 Introduction

I've always wondered how you measured the quality of art. It is very clear that staring at the Annunciation by Leonardo da Vinci and staring at an unmade bed in the Tate gallery are very different experiences. After all, I have teenage children and I can look at unmade beds every day of the week. If I dare mention these reservations to someone 'in the Art world', I am immediately accused of being shallow, unsophisticated or even worse, a scientist. So as a service to the world of measurement and at the risk of taking the fun out of discussing the quality of an art work, I would like to propose a scientific way of measuring the quality of art.

2 A proposed metric for art

Let N_a be the number of people who appreciate a particular art work. Let N_r be the number of people who could have produced it. Then define the quality of an art work, Q_{aw} as follows:-

$$Q_{aw} = \log\left(1 + \frac{N_a}{N_r}\right)$$

This has all the correct behaviour. First of all, it is well-defined because the fact that an art work exists means that $N_r > 0$. Secondly, even if nobody likes it including the artist, $Q_{aw} = 0$. Let's try out a few values.

Work of art	N_a	N_r	Q_{aw}
Unmade bed in the Tate	5000	500,000,000	0
Leonardo's Annunciation	1,000,000,000	1	9

I may be being a bit generous about 5000 people enjoying an unmade bed in an art gallery and I'm assuming there are around 500,000,000 teenage boys in the world. I'm also assuming that only 1/5 of the world's population has access to the kind of books which might contain Leonardo's masterpiece but I think we're definitely on the right lines here. When you try this against the contents of the Tate Modern versus the contents of the Uffizi say, there is a definite tendency for the contents of the Tate Modern to cluster around zero at the opposite end to the contents of the Uffizi.

Who says scientists are shallow :-) ?