

Friday, January 15, 2010

on other scientists

Initially, I am interested by the communication between and about scientists regarding their work. In particular, there seems to be a rhetoric in all of their pieces that plays masterfully with respect. In some cases it is verging on obsequious whereas others it seems to be used ironically. I can't help but feel, however, that it is *present* in all of the writings where one scientist addresses another or another's work. Perhaps there is simply a mutual respect for science itself that carries over into the words, however flattering or irreverent. Perhaps I've projected it out of my own respect for the brilliant minds that first conceived of these ideas. I wonder if this tone is common of the era, of the field of science, of the status to which they aspired or were assigned. I wonder also if a dialogue was a common way to express an argument, since there seems to be little that addresses specifically how the work was crafted, and focuses more, not surprisingly, I suppose, on the argument.

I do feel, perhaps out of respect, or perhaps out of bewilderment, that I need to understand the concepts they argue more thoroughly before responding in more detail to their respective responses.

Ideally, then, once I am more clear on these matters and their causes, I hope to re-read the commentaries and respond again, newly informed.

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Regarding Glass

The glass blowing lab held some interesting observations before, during and after the demonstration. It was interesting to watch the glass seem to take the color of the fire, and to reach differing degrees of malleability with different temperatures. We noticed that after placing the glass in the furnace for a short time, the glass blowers had about 10-15 seconds to work on the glass before it seemed to cool to the point where it needed to be reheated. Much of the physics of heat was particularly interesting in this case, and I was interested in the steps taken to be sure the two cups that fit inside one another in the reticella pattern were the same temperature. I wonder at how such things were accomplished before accurate measures of temperature were available. And at that though, when were those measures available, and how accurate were the first ones? Perhaps there was some measure of time as it relates to heat.

The glass tubes we saw at the beginning were most interesting to me, since the white strip that runs through the center looks substantially larger from the outside of the glass tube than it does when you turn it sideways to see that it is, in fact, only as a thread going through the tube, but from the outside of the tube facing horizontally, it appears to take up near a third of the diameter. I assume this is an effect of being entirely encased in a

concave lens of sorts, and I am intrigued by both this effect to the outside eye as well as what differences there are between the view when the material is directly pressed against the glass, versus how it might look if the white tube had been somehow suspended in a larger glass tube. Given our experimenting with lenses, I wonder if it would appear upside down at some distance (both viewer and object distance), though I suppose with a nondescript white tube, it would be difficult to tell!

Finally, I took note of the light reflections/refractions within the glass ball we saw at the beginning of our trip. I was interested to see that several of the reflections seemed to repeat in a pattern, though slightly skewed, and I wondered if that had more to do with the shape of the glass or the position of the light. For some reason, I find spheres of reflective surface very interesting!

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