



SOCIAL CHEMISTRY

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The Thermodynamics of Silence: Why Quiet People Emit a Cold Aura

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Abstract: This paper investigates a physically unverified yet socially undeniable phenomenon: that talkative people tend to make rooms warmer and introverts emit a detectable “cold aura.” We propose a revolutionary (and highly theoretical) mechanism that connects acoustic energy production with localized thermodynamic elevation. Building upon Newton’s early sound-speed theory and Laplace’s temperature correction thereof, we argue that the ceaseless chatter of extroverts radiates enough phonon-induced microheating to disturb the ambient equilibrium. Through deeply questionable derivations and semi-scientific vibes, we demonstrate that silence may, in fact, be thermodynamic stillness. Our findings have major implications for group chats, passive aggression, and the laws of thermodynamics (if they can handle it).

1. Introduction

Have you ever walked into a room and immediately thought: “Damn, it’s cold in here—and they haven’t even said a word”? This study was born from such moments. While mainstream physics may ignore the temperature shifts caused by passive-aggressive eye contact or gossip-fuelled vocal vibrations, we say: no more.

2. Theoretical Framework

We began with Newton’s speed of sound formula:

$$v = \sqrt{\frac{P}{\rho}} \quad (1)$$

which Laplace corrected to:

$$v = \sqrt{\frac{\gamma RT}{M}} \quad (2)$$

where T is temperature. Clearly, temperature affects sound. But what if sound affects temperature? We tested this by reverse-engineering Laplace’s logic in a wildly irresponsible direction.

2.1 The Talkative Equation

Let us define a “Talkativity Coefficient” τ proportional to words per minute (wpm). Then the acoustic energy E_a produced in a social setting is:

$$E_a = k \cdot \tau^2 \quad (3)$$

where k is a constant that we made up. This energy dissipates as heat, leading to a local temperature rise $\Delta T \propto E_a$.

3. Cold People and Thermodynamic Stillness

Introverts, by contrast, emit negligible acoustic energy. This aligns with the Zeroth Law of Diva Dynamics: “A cold person in equilibrium with silence remains unbothered.” Hence, their surrounding temperature remains unchanged or drops, contributing to what we socially perceive as a “cold aura”.

4. Simulation

We simulated a group conversation in a 5 m × 5 m room with five extroverts and one introvert. The introvert’s corner averaged 0.003°C colder. Science!

5. Conclusion

Our data, if you squint, shows that excessive talking causes microheating and social energy disturbances. The next time someone tells you you’re “radiating coldness,” you can be assured that you’re actually conserving entropy. Meanwhile, chatty people are essentially human Bunsen burners.

6. Limitations

These findings may not apply to extroverts who are also physicists, or people with metabolic disorders.

7. Conflicts of Interest

The author acknowledges a personal bias as a proud introvert who radiates coldness.

8. Acknowledgments

We thank Newton, Laplace, and every cold girl who said nothing but made us feel everything.

9. Notes and references

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