

## SHIPS PASSING IN THE NIGHT\*

Richard M. Felder  
Department of Chemical Engineering  
North Carolina State University  
Raleigh, NC 27695-7905

Ever get a sneaking suspicion that our students may not be totally focused on the intellectual delights of thermodynamics and transport phenomena while we're lecturing? It sometimes happens that other things are on their minds, especially when we're enthusiastically filling the board with letters, numbers, and squiggles that have no apparent connection to anything they know or care about. For example,

**Professor Cheever (P):** "...and next we'll examine laminar flow of a newtonian fluid in a circular pipe and derive Equation 4.5-35 in your text. We first draw this differential element...and now we itemize the stresses acting on it, starting with..."

**Student A (SA):** "*Hey Jerry, how's the rest of your schedule look?*"

**SB:** "*Not bad—I've got a couple of humanities courses so I shouldn't be overworked.*"

**SA:** "*Unless you get old Ferguson...last spring she gave us five books to read in the first week, including Moby Dick. It's about a fish.*"

**SC:** "*What did he say that arrow pointing up is?*"

**SD:** "*Who knows? ...I just wonder how I'm going to make it to December if I'm this lost now.*"

**SC:** "*You and everybody else...except maybe old Arthur here...Hey Art—you getting this?*"

**SE:** "*No, but I've seen his old tests—you don't need to understand anything, you just need to plug into formulas.*"

**SD:** "*Cool!*"

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**P:** "...and as we know from calculus, the limit of this expression as  $\Delta r$  approaches zero is what?...anyone remember?...no?...well, it's the partial derivative, and so we can replace..."

**SF:** "*What say, Chief—coming to the Delta Chi mixer tonight?*"

**SG:** "*No can do—I got a physics test tomorrow and if I don't get my grades up I can kiss my scholarship goodbye.*"

**SF:** "*Aw, come on, Sir Isaac—you know that stuff. A couple of brews and you'll be relaxed and ready to hit that test like a sledgehammer.*"

**SG:** "*That's what you said before the chemistry final last spring and if I remember right you relaxed your butt into a D.*"

**SF:** "*Yeah, but that final was...*"

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**SH:** *“So how’d it go last night?”*

**SI:** *“Don’t ask...that geek Rachel set me up with is majoring in soil science or something and he spent the whole night talking about fertilizer. Let me tell you a few things about phosphorus that you probably never...”*

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**P:** *“Now at this point we introduce the stress tensor, a convenient and concise representation of the normal and shear stresses in the...”*

**SJ:** *“Yo, Sally—hand me some of them chips there.”*

**SK:** *“...Problem 3 on the thermo homework?”*

**SL:** *“Yeah, it’s a killer, but it’s cute—you have to figure out the equilibrium partial pressure of nitrous oxide to know if the dental hygienist poisoned the bank president.”*

**SK:** *“Right, I figured that much out, but at that pressure you can’t just plug into Raoult’s law and I don’t how how you...”*

**SJ:** *“Yo, Gene, can I have a hit of your Dr. Pepper?”*

**SM:** *“What time you got—I think this has been going on for about four hours but I’m not sure.”*

**SA:** *“Twenty minutes to go and counting.”*

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**SA:** *“Ten minutes.”*

**SN:** *“Shh—don’t wake Brenda...she’s the only one getting anything useful out of this class.”*

**SO:** *“It’s my grandmother this time—I’ll probably have to go home for the weekend again and just hope I can find some time to look over the...”*

**SJ:** *“Yo, Bruce, hand me a couple of them Cheez Doodles, would ya?”*

**SQ:** *“Hear about Monica, Sheila’s roommate?”*

**SR:** *“No, what about her?”*

**SQ:** *“She’s been acting weird lately, just lying in her room staring at the ceiling for hours.”*

**SR:** *“Sounds bad.”*

**SQ:** *“Gets worse—someone found her passed out next to an empty pill bottle yesterday. Sheila saw her at the hospital today and thinks she’ll be all right but she still looks kind of green.”*

**SR:** *“Bummer! That’s like what happened to Rudy last year, only instead of popping pills he...”*

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**SA:** *“One minute.”*

**ST:** *“...ok, now here in Problem 4 what I think we need to do is...”*

**SU:** *“...so the horse says to the chicken...”*

**SJ:** *“Yo, Angie, lemme have a couple of those M&M’s—I like the orange ones.”*

**SV:** *“...and at least we got to do something in those class exercises Furze was always giving in mechanics—you make me sit for an hour without doing anything and I’m...”*

**SG:** *“...no, we’re going down to the beach Friday right after class—tell Jack and Ella we’ll meet Monday afternoon in the lounge and finish that report, and then we can...”*

**SN:** *“Man, this headache is about to kill me.”*

**SE:** *“... but that correlation only works at low concentrations. Maybe if we...”*

**SW:** *“Hey, Cindy—how about asking him if we’re responsible for this stuff on the exam. I love the faces they make when you ask them that.”*

**SX:** *“...and he’s really mad and told Mom that he’s not going to pay my tuition any more so I may have to find a job, and I don’t think I can stay in school and work enough hours to...”*

**SA:** *“...and there’s the buzzer, and I’m out of here.”*

**SY:** *“Yo, Vinnie, bring your book to the Keg tonight—I got a few questions about Eq. 4.5–237.”*

**SJ:** *“Hey, no problem—that one’s my favorite. Come on—let’s grab a burger and fries across the street before we go to the...”*

**P:** *“...and now if you substitute this expression for the friction term you end with Equation 4.5–35. Everybody understand? Good, see you Friday.”*

**SA:** *“And the point of all that is?”*

**SZ:** *“Beats me.”*