# Reflections on Meditation for Scientists

## AGU Ocean Sciences Workshop

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# On research and the creative process

When my mind is filled with this hodge-podge to the point where I cannot grasp it all at once, then I do a very curious thing. I try to defocus my mind, to deliberately lose it all, to melt the fragments of ideas into something akin to a hallucinatory vision.

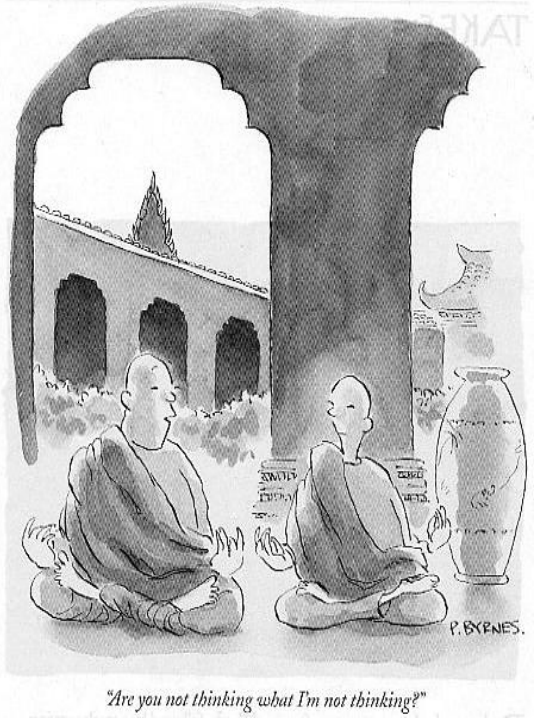
In effect I try to raise the conceptual temperature to some equilibrium value where structure disappears for a few days, and then try lowering it to see what crystallizes out. It takes a lot of nervous energy, and sounds a bit mystical, but I can explain it in no other way.

It often happens that the crystals first formed do not fit together logically, so I try to try again, nearly weeping with frustration. Eventually crystals that do fit logically and have some relation to nature do emerge from the melt. And one wonders why no one ever thought of the idea before.

Henry Stommel, oceanographer, Collected Works, Volume I, page 10

# Why meditation is in our lives

- Daily morning practice exercises/stretches mind by stilling the mind fluctuations.
- It broadens perspectives to experientially appreciate that mind & awareness are more than thoughts.
- Meditation complements thinking by nurturing space and insight.
- It fosters an awareness of the way things are rather than how we think they are (great skill for scientists!)
- Meditation is a systematic method to investigate subjective experiences: e.g., “Who am I ?”
- Stress = viscosity * strain. Meditation helps to reduce “viscosity” so that life strains are less easily converted to stress.




*“Are you not thinking what I'm not thinking?”*

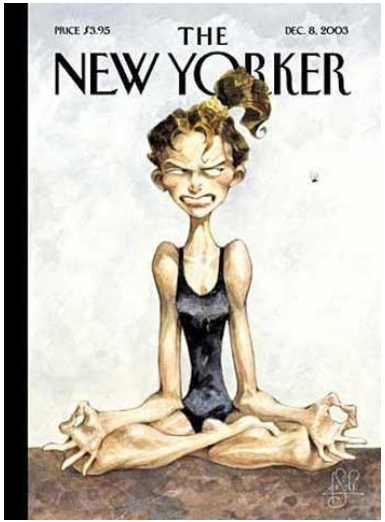
# Some meditation methods/styles

- Vipassana & Mindfulness (awareness)
- Contemplative (koan, non-rational conceptual)
- Movement (yoga, walking, whirling, swimming, surfing)
- Breath/Mantra/Chant/Kirtan (concentration, devotion)
- Metta/Loving-Kindness (compassion, empathy)




# Meditation practice: what might work for you

- Daily practice: mind & body need training to open up to stillness. It gets more natural with practice (just like science).
- Early morning before the mind is overly engaged in activities.
- Modest start (e.g., 10 min) built up to 60-90 min after year(s).
- Seated posture (bum higher than knees) w/ crossed legs to keep body balanced & aligned.
- Meditation time is balanced with family time.
- Judgements can arise (“I’m no good at this!”). Yet patience & persistence payoff. It is called meditation practice after all!
- Group meditation & teachers can be very useful.
- Anytime is a good time to develop a meditation practice.



# Selection of books

- Posture of Meditation: practical details for the mechanics of sitting in meditation.
- The Mind Illuminated: manual for the vast array of meditation stages and styles from the perspective of a neuroscientist and practicing meditator.
- Why Buddhism is True: straightforward language with a psychological perspective on meditation.
- Altered Traits: evidence-based research on how meditation changes (helps) the mind.
- Mindfulness in Plain English: Just as the title says!


"The key to meditation is learning to stay."

# Many thanks!