

H A&S 253C

NORTHWEST COASTAL STORIES

TURBULENCE AND UNCERTAINTY IN SCIENCE AND IN CULTURE



Spring 2006 · 5 credits · MGH 238 · TTh 10:30–12:20

<http://coast.ocean.washington.edu/coastalstories>



instructor: Neil Banas

neil@ocean.washington.edu

(office phone = 221-4402, but I don't check my voicemail every day)

office hours: Tuesdays 12:45–2:30 at Cafe Allegro, 4214 Univ Way

(in the alley between the Ave and 15th, *not* the one at the College Inn)

Wednesdays 10:30–12:30 at my office, Ocean Sciences Bldg 311

(wavy-glass-fronted building at the bottom of 15th Ave)

I'm happy to meet other times too: just ask.

lab assistant: Lauren Curry

Ocean Sciences Bldg 339

lbcurry@u.washington.edu

This course will follow Jonathan Raban's remarkable travelogue *Passage to Juneau* on a tour through the human and natural history of the Pacific Northwest coastal waters. We'll discuss chaos theory and the circulation of Puget Sound; coastal ecology and climate change; the art and mythology of the Northwest tribes and the problems of ethnography; the Vancouver expedition and the Romantic Sublime. The unifying theme is the interplay between order and chaos, and how we cope (in science, in literary criticism, in political decision-making) with the limits of rationality and the limits of our knowledge. How do we, and how did the indigenous cultures on this coast, deal with natural unpredictability and all the dangers that result—from navigating a turbulent channel to managing a salmon fishery?

books: · Raban, *Passage to Juneau: A Sea and Its Meanings*

· Botkin, *Discordant Harmonies: A New Ecology for the 21st Century*

· course reader

all three available at U Bookstore

format: This course will be driven by student discussion and writing. I'll lecture sometimes, but only *after* you guys have raised your questions, set an agenda, and worked as far as you can into each week's material. If you like discussions to teach you something rather than just dither around, it's essential that you not only do the reading, but

assignments: 1) **read, reread, and think about the readings until you have questions.**
Questions that you want to spend time on in class.

To help with this, there's a Question Board on the class website: 



- 2) every week, **post a short question or comment** about the week's readings on the Question Board **by Monday at 4 pm.**
- A couple of sentences is fine. In fact, a few sentences is the upper limit: no three-page essays! Just as when we're talking in person, it's bad for the conversation if one person goes on too long.
 - This is 10% of your grade, credit/no credit, one point per week. Responding to each other is fantastic, but I don't grade it.
- 3) Since this is a discussion class, **participation counts.** But that means in-class participation, online participation (see above), over-the-weekend participation.... The standard is **helpfulness**, not how much you talk.
- Halfway through the course, I'll ask for a 2-3 page self-and-course evaluation, and in it you'll give yourselves a participation grade (20% of total).
- 4) During the first half of the course, you'll assemble an **online portfolio of short essays** (6-8 pages total, 30% of your grade) consisting of responses to prompts from me, and responses to other people's responses.
- Include at least one of each. Keep the total number of documents down to 5 or less. Each should be at least a page (300 words). Beyond that, the breakdown is entirely up to you.
 - These go up in the "portfolios" section of the course website, and are shared with the class. Post your first essay no later than the end of week 3, so your classmates have a choice of things to respond to.
- 5) Last assignment: **a research project (10-15 pages total, 40% of grade, due during finals period).** Picking a topic or genre that's new and scary for you will be rewarded! Options include lab experiments, fiction, visual narratives, or a plain old term paper: the key is independent reading and research. Details to come in a few weeks.

grading: to summarize:

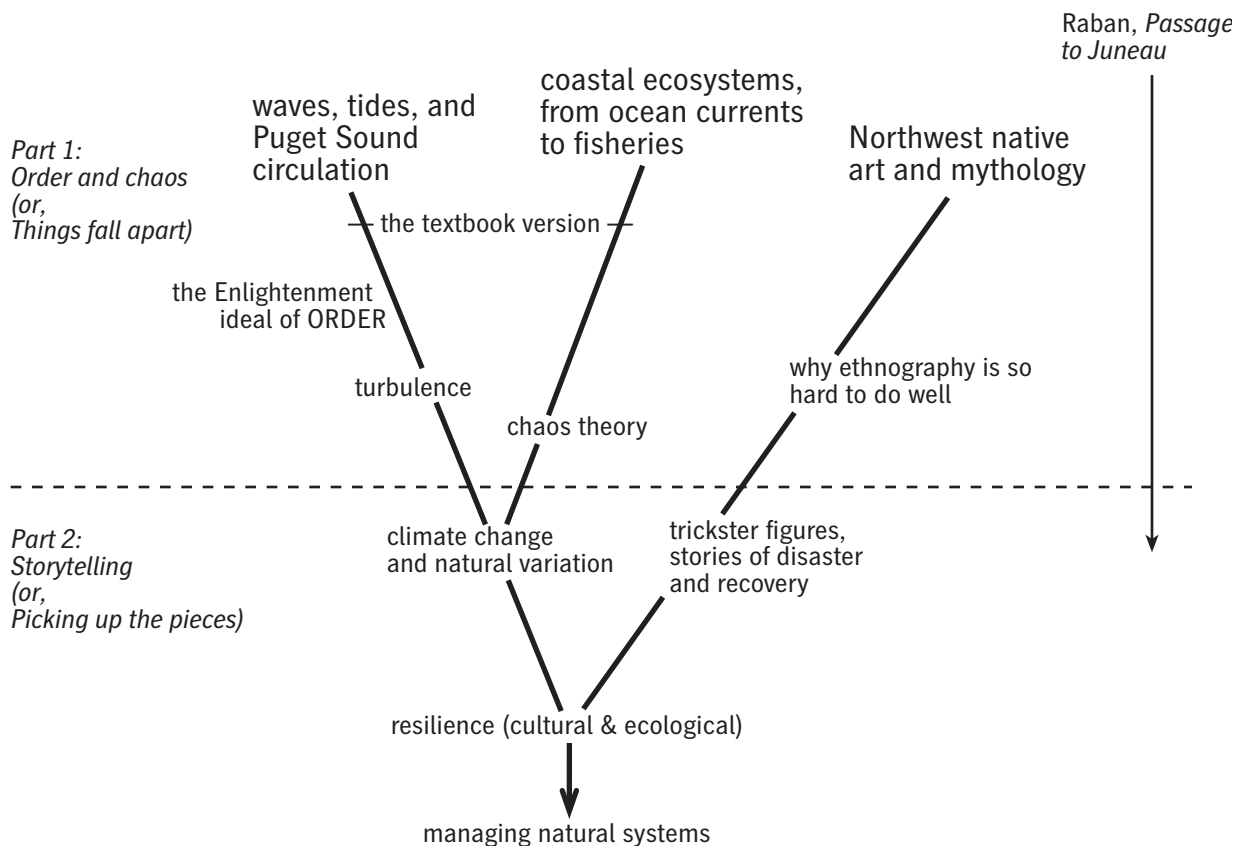
- 10% questions on the question board (CR/NC)
- 20% participation (self-graded)
- 30% portfolio of short essays
- 40% final research project

I'll grade the portfolios all at once, but if you want feedback along the way, just ask.

The grading rubric is set up to reward, not punish, experimentation in your writing. If you're working at a kind of writing that's new to you, but you don't know if the final product is a successful, standalone essay, don't despair or revert to the familiar—attach a short postscript explaining your intentions and process.

As far as extensions go: it's worth asking. But I expect you to do the considerate thing and *ask in advance*.

course outline (short version):



Part 1: Order and Chaos (or, Things Fall Apart)

A stuffy astronomy professor is lecturing to a huge class. He puts up a slide of the sun and begins, "The sun, like any star, is fundamentally a very simple structure —" From the back of the room a voice calls out, "Yeah, you'd look pretty simple too from 93 million miles away."

Our heads, like intro-level textbooks, are full of simple stories about how the natural world works and how other cultures work. But what do cultures and nature look like when we get up close to them? In this part of the course, with *Passage to Juneau* as our guide, we explore the many ways in which the world rebels against the beautiful 18th-century exaltation of Order and Reason.

Week 1: Getting started

Thur 3/30: Raban, ch. 1, "Fitting Out" and ch. 2, "Deep Water" (pp. 3-90)

- post your Question Board post by **midnight Wednesday** (normally, it's 4 pm Monday).
- also **create an placeholder for yourself in the Portfolios area** of the website. (This is so we can iron out technical difficulties as soon as possible.)

Week 2: Enlightenment science: We ♥ Order

This week is about assembling simple, classical stories of how tides, currents, and ecosystems work in coastal waters. This is the only time in the course that we will work from standard science textbooks.

Tues 4/6: Garrison, *Oceanography: Waves, Tides*
 Schultz, excerpt from *The Northwest Coast: A Natural History*
 Garrison, *Oceanography*, "Primary Productivity, Plankton, and Plants"
 Mann, *Ecology of Coastal Waters*, "Coastal Upwelling Systems"

WHAT TO READ FOR: the questions we'll work on in class are

- "Describe the chain of cause and effect that connects astronomical motions (earth, moon, and sun) to the currents we see in Puget Sound."
- "Describe the chain of cause and effect that connects the wind direction on the Washington coast to the growth of fish populations."

The goal is to construct simple, clear stories: as you read, decide which details are essential links in the chain and which ones can be safely ignored.

Thur 4/8: Worster, *Nature's Economy*, excerpt from "The Empire of Reason"

Worster discusses 18th-century natural science, and the vision of cosmic orderliness that pervaded it. This vision seems so quaint at first—but have we really stopped thinking about nature and society like 18th-century country pastors? Would we even want to?

Week 3: The Romantics: We ♥ Turbulence

Estuaries like Puget Sound ♥ turbulence too. This week, a very fun lab experiment using a scale model of Puget Sound that will deepen our story about waves and tides; more thoughts about 18th and 19th century ideals from Raban.

- Tues 4/11: Duxbury and Duxbury, “Estuaries” and “Flushing Time”
 !!! class meets in the Old Ocean Building today, not MGH. Walking directions on the website.
 !!! also, half of you will come Wednesday 3-5 pm instead of Tues! We’ll organize this in class.
- Thur 4/13: Raban ch. 3, “Sailing into the Sublime” (pp. 91-181)
 Make sure you’ve posted the first piece of your portfolio by the end of this week.

Week 4: Eddies, animals, and transformation

This week we start working on Northwest *ethnography* just as we’ve previously been working on Northwest *oceanography*. Are these studies as parallel as the words suggest?

We’ll look at Haida art and Haida mythology, and try to make connections like the ones Raban makes. For example: there’s a theme of *transformation* running through the Haida sources this week; what else in the readings so far does that theme connect them to?

- Tues 4/18: Raban, ch. 4, “Potts Lagoon” (pp. 182-245)
 Reid, selections from *Solitary Raven*
- Thur 4/20: Bringhurst, *A Story as Sharp as a Knife: “Goose Food”* and
 “The Anthropologist and the Dogfish”

Week 5: The onset of chaos

The reading from Raban connects back to last week. The readings from Botkin and Gleick tell the story of how textbook-simple ecology mutates into the frightening unpredictability of real ecological problems—but also introduce chaos theory, which 4 out of 5 applied mathematicians agree is just the coolest thing ever.

- Tues 4/25: Raban, ch. 6, “The Charred Remains” + first part ch. 7, “On the Beach”
 (pp. 293-397)
 note: we’re skipping over Raban ch. 5, although I hope you’ll skim it to know what’s in it.
 Botkin, *Discordant Harmonies*, ch. 1–3 (Botkin is a book, not in the reader)
 Gleick, *Chaos: “The Butterfly Effect”* and “Life’s Ups and Downs”
- Thur 4/27: no further reading, but please review the coastal ecology discussion from week 2.
 !!! class today meets in Ocean Sciences Bldg 111 for a computer-lab exercise. Walking directions on the course website.

Week 6: Synthesis

Tues 5/2: Raban, rest of ch. 7 + ch. 8, “Komogwa” (pp. 397-435)
Gunderson and Holling, *Panarchy: “Caricatures of Nature”*

online portfolios + self-evaluations due at class time

Thur 5/4: in-class discussion with Jonathan Raban (I hope)

Part 2: Storytelling (or, Picking Up the Pieces)

So: tides start as elegant, astronomical, eternal things but turn into messy, local, turbulent things. Our ecosystem models turn into treacherous mathematical landscapes full of pockets of chaos as soon as we increase their complexity. Our ethnographic knowledge, which at one point in history seemed so absolute and universal, turns out to consist of tiny glimpses of a teeming conversation we mostly missed out on.

What do we do, as academics, to avoid just throwing up our hands? Contemporary ethnographers, working scientists, and Haida literary masters all face this problem of the world’s unpredictability, but find ways to continue to have something satisfying to say. What do the stories they tell have in common?

Week 7: Tricksters

Okay. Hang on. Wait a minute. What does it mean for a culture to declare that a horny, potty-mouthed raven created the universe —and that the stories of this are their most sacred and serious literature—especially when the story changes every time an ethnographer tries to pin down the details?

Tues 5/9: Toelken and Scott, “Poetic Retranslation and the ‘Pretty Languages’ of Yellowman”
Bringhurst, *A Story as Sharp as a Knife*: ch. 11, ch. 13, and excerpt ch. 14

Thur 5/11: another chapter from Bringhurst, which I forgot to put in the course reader: I’ll hand out copies.

Week 8: Response to Disturbance

Close reading of two stories. The first is an academic story by the religion scholar J. Z. Smith: a story about how we should and shouldn’t interpret other people’s stories, as oblique and packed with ideas as a good poem. (And like a good poem, there’s no point trying to skim or speedread it. Make some tea, settle in, and read it more than once.) “The One They Hand Along” is a beautifully complex Haida tale, that contains echoes of Raban’s sucked-under-by-a-whirlpool stories, the Hainuwele story that Smith retells, and echoes of 18th-century ecology too. Keep going—what else do you find echoes of?

Tues 5/16: Smith, “Map Is Not Territory”

Thur 5/18: Bringhurst, ch. 3 (“The One They Hand Along”), ch. 4, and first part ch. 5

Week 9: Scales of natural variation

This week we look at natural variation and the effects of climate change on Puget Sound circulation and coastal ecology. There are two levels of connection to our ethnographic discussion from the past couple of weeks. First: how does this scientific picture of instability in nature relate to the Haida mythological vision of instability in human affairs? Is this a trivial analogy or a profound one? Second: how does the activity of turning raw data into scientific stories compare with the activity (see Smith) of turning raw mythology into ethnographic stories?

Tues 5/23: no new reading, but please review our discussion of Puget Sound circulation from week 3.
!!! class today meets in Ocean Sciences Bldg room 111 (the computer lab).

Thur 5/25: Finney, "Fisheries productivity in the northeastern Pacific Ocean over the past 2,200 years"
 Botkin, chapter 4

Week 10: Managing for resilience

Everything we've talked about in this course converges (no, really!) in the theme of ecological resilience and the very practical question of how to manage unpredictable, constantly changing natural resources.

Tues 5/30: Suttles, *Coast Salish Essays*: "Variation in Habitat and Culture on the Northwest Coast"
 Botkin, chapter 10 + postscript
 Taylor, *Making Salmon* (excerpts)

Thur 6/1: no new reading

Finals week

Wed 6/7: **final papers due, 5 pm**
 turn them in at the Honors front desk or at my office