

Phil 2505, S 2011, Indeterminism, BT and BST*

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We meet on Tuesdays from 10:00 to 1:00 in the Sellars Room. We will always take a full half-hour break.

My office hours, in Room 10something CL, will be from 1:00–3:00 after class on Tuesdays, provided that time is all right with all.

At our first meeting, we will discuss how best to structure the course in order to maximize the participation of everyone, but without excess burden on anyone. I expect that there will be only two or three of us, in which case I would request that each student conduct a half-hour of lecturing or discussion-leading most Tuesdays. That would be most enjoyable for all. But it is all open to discussion, and depends on up with how many participants we wind.

Papers (term papers or occasional papers) are *strictly optional*. We are on the leading edge of an interesting area of research, so that as long as you are not put off by henscratches, there will be lots of debatable stuff on which to write papers. If you write 'em, I'll read 'em.

Readings will come from material posted on www.pitt.edu/~belnap. Don't forget the curl. Look under "Papers and publications." Most of these are numbered; I'll use those numbers in making references.

The readings will be from more or less recent articles in most of which NB has had a hand. We will start with the most non-technical, and gradually

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work up to the more technical. No one will be expected to have command of logic beyond standard topics in first-order logic.

In my lectures, i will often use “subproofs” in the natural-deduction style of my teacher, Fred Fitch. You should be able to follow such proofs (without being able to create them). Before the first such occurrence, I’ll spend a half hour explaining the notation. For those unfamiliar with the notation, I suggest a quick look at the sections dealing with proofs in NB’s *Notes on the art of logic*. (It’s listed near the bottom of the list of publications.)

We will go through the articles in the following order (approximate), at least as far as we can *reasonably* get. Titles are shortened. Numbers (#) are from Papers and Publications on www.pitt.edu/~belnap.

1. General introduction to branching.
 - (a) Branching histories approach. Listed between #135 and #136.
 - (b) Future contingents and the battle tomorrow. Listed at end of publications. Overlaps with material found elsewhere, so best used for either preliminary outline or for review or summary.
2. Branching times.
 - (a) *Facing the future*, chapters 7 and 8. Listed at end of the list of publications.
 - (b) Double time references. #134.
3. Branching space-times.
 - (a) From Newton to BST (revised). A revision of #145. Listed at end.
 - (b) BST postprint of BST92. Listed after #140.
 - (c) Indeterminism is a modal notion (Placek and Belnap 2010). Forthcoming, *Synthese*. Listed at end.
 - (d) Causation (*causae causantes*). #139.
 - (e) How causal probabilities fit. #141.
 - (f) Probabilities and propensities (revised). This revision-correction of #144 is listed at end.

- (g) Agents in BST (Belnap). #136.
- (h) On individuals in branching histories (Placek). I will make this available later.

4. Funny business.

- (a) EPR-like funny business. #133.
- (b) No-common-cause funny business. #135.
- (c) Infinite correlations funny business #147.

5. Other stuff. These will be made available later. Most of them, however, are already available on www.philsci-archive.pitt.edu.

- (a) Branch dependence (Müller) in QM.
- (b) Possibilities without histories (Placek).
- (c) Holism in BST (Placek).
- (d) I guess a few more go here. Write some yourself.