Between Saying and Doing: Towards an Analytic Pragmatism

## Lecture Two: Elaborating Abilities: The Expressive Role of Logic

Section 1: Automata as Algorithmically Elaborating Abilities

Automata are not just syntactic engines (symbol manipulators). More generally, they should be thought of as putting together primitive abilities so they add up to (are elaborated into) more complex ones. They *implement* PP-sufficiency relations: the kind of relation that obtains when the capacity to engage in one sort of practice or exercise one sort of ability is *in principle sufficient* for the capacity to engage in other practices, or exercise other abilities.

Section 2: Transducing Automata

Transducing automata generalize the primitive reading-and-writing abilities of finite state automata to include *discriminating stimuli* of any kind, on the input side, and *differentially responding* in any way, on the output side. *Single-state transducing automata* (SSTA) can be specified by state-tables that are just sets of pairs $<S_i,R_j>$ of stimuli and responses they would elicit. They are just sets of reliable differential responsive dispositions. They can execute *straight-schedule* algorithms, or lists of commands. *Finite-state transducing automata* (FSTAs) can not only respond differentially to stimuli by producing performances from its responsive repertoire, but can respond differentially by changing state. So it can combine its primitive abilities according to *conditional branched-schedule algorithms*.

A Finite-State Transducing Automaton
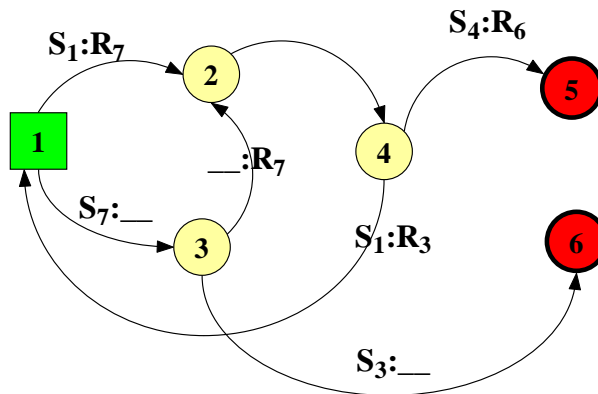
The advance from *behaviorism* to *functionalism* in the philosophy of mind corresponds to the move from a single-state to a multi-state model.
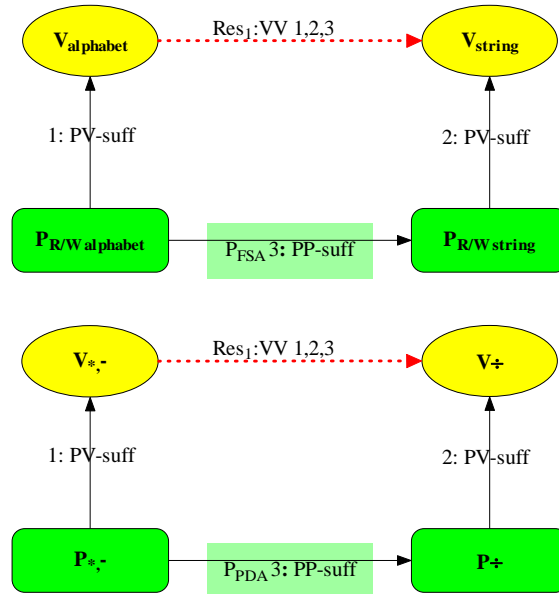
Idealizing assumptions implicit in the automaton-theoretic metavocabulary for specifying abilities that implement the algorithmic PP-sufficiency of some primitive abilities for some complex ability:

Response Substitution: Any stimulus to which a system can respond differentially can be connected to any response it is capable of differentially producing.

Arbitrary State Formation: The stimulus-response connections of which a system is capable can be arbitrarily combined into *states*. If a system can respond to stimuli of kind S_i with responses of kind R_j and to stimuli of kind S_k with responses of kind R_l, and if S_i and S_k are compatible and so are R_j and R_l then it can be in a state in which it is disposed to respond to S_i with R_j *and* to S_k with R_l.

Arbitrary State Permutation: States can be arbitrarily formed into state *tables*.

Section 3: Autonomous Discursive Practices, Asserting, and Inferring

**MUA
Terminology**
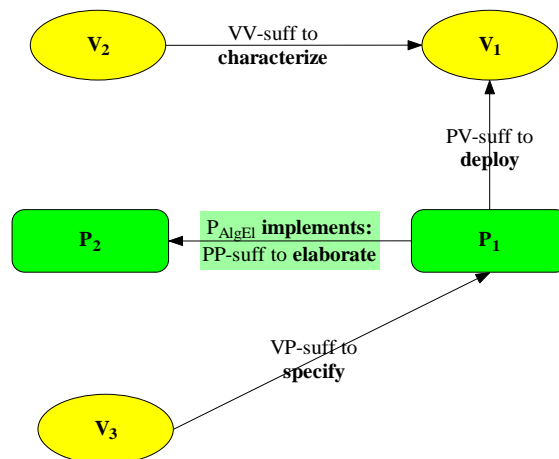
Q: Are there any practical abilities that are *universally* PV-necessary? This is a way of asking what sorts of *doings* deserve to count as *sayings*.

A: Every *autonomous discursive practice* must include practices of *asserting* and *inferring* (which mutually presuppose one another).
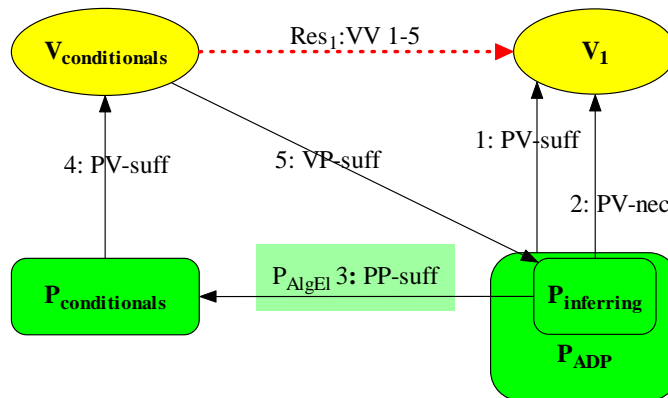
Section 4: Introducing Conditionals

Conditionals are both *elaborated* from and *explicative* of inferential practices.

**Elaborating
Conditionals**
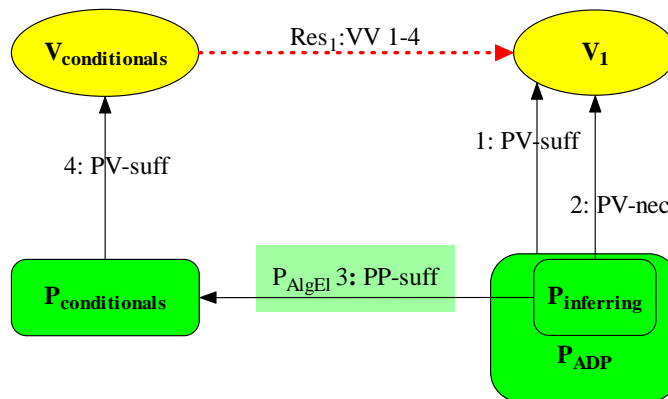
**Elaborated-Explicating (LX)
Conditionals**

A "universal LX-vocabulary" is distinguished by three characteristics:
  i)   being deployed by a set of practices-or-abilities that are algorithmically elaborated from
  ii)   practices-or-abilities that are PV-necessary for *every* autonomous vocabulary (and hence every vocabulary whatsoever) and that
  iii)   suffice to specify explicitly those PV-necessary practices-or-abilities.

Section 5: Characterizing Logic: the Logicist's Dilemma

The "logicist's dilemma" arises from the tension between two requirements:
- Semantic Transparency: The auxiliary vocabulary employed by the philosophical analyst should not add anything distinctive of its own. For any substantive content that it contributes impugns the claim that what can be said in the terms of the target vocabulary is somehow present already in the base vocabulary or at least is intelligible entirely in terms of what that vocabulary expresses.
- Analytic Efficacy: Using the auxiliary vocabulary must *help* in the process of establishing the desired semantic relation between vocabularies—whether that is definability, translatability, reducibility, supervenience, or whatever.

Resolution: Being an LX-vocabulary with respect to every autonomous vocabulary is necessary and sufficient for playing the privileged role logical vocabulary is called on to play in the classical project of semantic analysis.
- The fact that practices sufficient to deploy logical vocabulary can be algorithmically elaborated from practices necessary to deploy any autonomous vocabulary vindicates the *semantic transparency* of logical vocabulary. The capacity to deploy logical vocabulary (or any universally LX-vocabulary) is in this sense always already *implicit* in the capacity to deploy any vocabulary at all that might be chosen to serve as the base vocabulary of a semantic analysis or explication of any target vocabulary.
- The fact that logical vocabulary makes explicit features of practices PV-necessary to deploy any autonomous vocabulary shows why and how logical vocabulary satisfies the condition of *analytic efficacy*. For the task for which logical vocabulary must prove itself efficacious is an *expressive* task: to show how to *say* in a *different* vocabulary what can already be said using the target vocabulary. Logical vocabulary must make it possible to *say* something one could not *say* without it.

The semantic relation between LX-vocabularies and the vocabularies from which they are elaborated is an essentially *pragmatically mediated* one. If that relation really is the one that explains and justifies the utility of logical vocabulary in semantic analysis, then *all* elaboration and explication, including *semantic* elaboration and explication, is implicitly *pragmatically mediated*. For in order to explain the legitimacy of logical elaboration of one vocabulary into another, we must appeal to the pragmatic elaboration of one set of abilities into another. If that is right, then supplementing the traditional philosophical analytical concern with relations between the *meanings* expressed by different kinds of vocabulary by worrying also about the relations between those meanings and the *use* of those vocabularies in virtue of which they express those meanings—as I recommended in my first lecture—is not so much *extending* the classical project of analysis as *unpacking* it, to reveal a pragmatic structure that turns out to have been implicit in the semantic project all along. For the conclusion I have been arguing for is that it is *because* some vocabularies are universal pragmatically elaborated and explicitating vocabularies that semantic analysis is possible at all. That strong claim is a central element of a further kind of pragmatism about semantic analysis: what I will call *analytic pragmatism*, whose principal tool is meaning-use analysis.