Handout for Week 12

<u>**Plan**</u>**:**
1) The Substitutional-functional methodology:
   Frege, Bolzano, Kant and Euclid.
   Ampliativity, and the Role of Logic
2) Abstraction. From concepts to objects.
3) Frege's 3-world ontology: subjective things, actual ('*wirklich*') objective things, and nonactual objective things (the world of senses).
4) Sellars's 2-world ontology: the world in the *narrow*, discourse-independent sense, and the world in the *broad*, discourse-dependent sense.
5) Distinguishing *reference-dependence* of one vocabulary on another from *sense-*dependence of one vocabulary on another.

<u>**Punchlines**</u>:

1) The **Substitutional-functional methodology**:
   Frege, Bolzano, Kant and Euclid.
   Ampliativity, and the Role of Logic
   a) Bolzano's use of the functional-substitutional methodology is more general than Frege's along two dimensions:
   i.   Bolzano applies it to *define* the goodness of implications and incompatibilities generally (in terms of truth-values), *by* applying it to whole (pairs of) *sets* of sentences, not just to sentences and subsentential expressions.
   ii.   Bolzano applies it to *all* vocabularies, not just *logical* ones.
   b) But Frege pursues the project of *logical expressivism*: using logical vocabulary to *make explicit* the implications and incompatibilities
   c) Frege follows Kant in aspiring to a *transcendental pragmatics* (Sellars's term), which aims at an account of necessary features of the *use* of *any* vocabulary.
      Following Euclid, we can imagine this as a *computational pragmatics*, algorithmically elaborating a set of *basis abilities* into a set of *elaborated abilities*.

2) **Abstraction**:
   Defining new *objects* from (Fregean) *concepts*.
   All of Frege's technical concepts are introduced by abstraction: <u>*begrifflich Inhalt*</u>, <u>*Sinn*</u>, <u>*Bedeutung*</u>, <u>*truth value*</u>, <u>course of values</u>
   Issue of cross-sortal identities of these new objects (Julius Caesar problem).
   Issue of *inconsistent* objects: courses of values (*Wertverläufe*).
   Possible solution: relax requirement that truth-values of *all* identities must be settled in order to introduce new terms/objects. What matters is settling *inferences*.

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3) **Frege's 3-world ontology**:
   This is a division of *Bedeutungen*, since what there is can be referred to (including senses, by indirect discourse and semantic discourse, and subjective episodes and states). This is a Kantian point.
   Issues unresolved by Frege's "third-world realism" about senses, objective but not actual (=*wirklich,* cf. *werken*, to work), which includes *facts* (for Frege: "thoughts that are true") include status of
   i.   *concepts*, which are *Bedeutungen* of functions whose values are truth-values, and
   ii.   *Truth values,*
   iii.   *Functions*, apart from *sense* functions, which are presumably in the world of senses.
   iv.   *abstracta* that are not *linguistic*, such as the direction of the Earth's axis, or its center of mass.
           These are certainly invoked in *causal explanations*. They are "idealizations" in the sense Nancy Cartwright diagnoses in *How the Laws of Physics Lie*.
These all raise the issue of whether the world of *actual* objective things, contains more than *objects*. Remember, the *facts* are in the world of *senses*—for instance, the *fact that* an object has a certain property or stands in a certain relation, that is, that a *concept* applies to it.
This is one transition to consideration of Sellars's *nominalism*—in particular, his *metalinguistic* nominalism.

4) **Sellars's two-world ontology**:
   Discourse-dependence rather than subject (mind)-dependence.
   Nominalistic, in the sense of restricted to *objects*: no functions or (therefore) concepts, properties, relations, propositions or (therefore) facts.
   Nominalism is the result of Sellars's (following Carnap's) *metalinguistic* analysis of Fregean *concepts*: properties and relations, and the *propositions* and so (non-Fregean) *facts*.

5) **Sense-dependence vs. reference-dependence**:
   Ontologically, the *Bedeutungen* of one vocabulary cannot exist unless the *Bedeutungen* of the other vocabulary exist, vs. epistemologically-pragmatically, one cannot grasp the *Sinne* of the one vocabulary unless one grasps the *Sinne* of the other vocabulary.
   Example of sense-dependence without reference-dependence: response-dependent properties.
   The sense in which the species of *abstracta* that includes properties (=Fregean *concepts*), relations, and propositions (including Frege an *facts*) are *metalinguistic* need involve only *sense*-dependence, not *reference*-dependence. It is *not*, as Sellars takes it to be, an argument for *nominalism*.