

## Handout of Laudan's "A Confutation of Convergent Realism"

Zhonghao Lu, *University of Pittsburgh*

### Two Centre Arguments which Laudan contributes as the *Convergent Realism*

#### I. Argument that theories in (mature) sciences do refer

(A) If the central terms in a theory genuinely refer, then such theory would be successful.

(B) If a theory is successful, then the central terms in a theory genuinely refer.

**Conclusion:** All the central terms in theories in our successful mature sciences do refer.

Against (A): Many theories in history in which the central terms genuinely refer are unsuccessful. (early theories of atoms in chemistry, for example)

Even a weaker claim (A') that *If the central terms in a theory genuinely refer, then such theory would usually be successful* is untrue, for it is easy to constitute many such theories.

(Comment: How do we judge whether the central terms *genuinely refer*?)

Against (B): The Central terms in many successful theories in history do not genuinely refer. (the electromagnetic aether, the optical aether, the caloric theory of heat, for example)

Scientific realists can claim that only mature theories satisfy (B), but it is not clear how to non-circularly define what is a mature theory.

Scientific realists can concede that (B') *If a theory is successful, then some of the central terms in a theory genuinely refer*, but this would blur the distinctions between realism and non-realism.

#### A More Roundabout Route to I

(C) If a theory is approximately true, then it will be explanatorily successful.

(D) If a theory is explanatorily successful, then it is probably proximately true.

Against (C): An approximately true theory can be unsuccessful.

Scientific realists may cite the notion of verisimilitude (as it seems that a theory of which the *central* part is true will be successful), but it is not clear how to non-circularly define what is a mature theory.

Against (D): A theory in which the central terms do not refer cannot count as approximately true, then the objection to (B) still holds.

## II. The Convergent Argument

(E) If the earlier theories in a 'mature' science are approximately true and if the central terms of those theories genuinely refer, then later more successful theories in the same science will preserve the earlier theories as limiting cases;

(F) Scientists seek to preserve earlier theories as limiting cases and generally succeed. '

Objections:

If the two different theories have different ontological structures and commitments, (E) is difficult to hold.

Even if (E) is true, the new theory does not explain the success of former theories.

## Conclusions



The structure of this paper is very clear.



Powerful objections which make scientific realism to change its former naïve form.



Not explain what it means that the central terms of a theory *refer* or not, which undermine his several objections.