Placebos and the Logic of Placebo Comparison
Robin Nunn’s Arguments:

- Nunn argues we should abandon the notions of ‘placebos’ and ‘placebo effects’. He argues for two claims:
  1. The concepts of a ‘placebo’ does not make sense, even on the most plausible definitions.
  2. Empirical research into ‘placebos effects’ shows there is no distinctive or singular effect or mechanism.

- I want to add an extra argument for Nunn’s conclusion; by considering the logic of placebo comparison.

- I claim:
  - A legitimate placebo comparison is determined by the logic it follows, not the objects it involves.
  - And if a comparison follows the right logic, it is unnecessary and unhelpful to call any objects ‘placebos’.
The Logic of Placebo Comparison

The epistemic aim of placebo comparisons is to establish knowledge about efficacy.
- There may be other instrumental aims.
- Placebo comparison is not the only way we might learn about efficacy.

How? - The basic idea was neatly summed up by Austin Bradford Hill:

‘To some patients a specific drug is given, to others it is not. The progress and prognosis of these patients are then compared. But in making this comparison in relation to the treatment the fundamental assumption is made—and must be made—that the two groups are equivalent in all respects, except for the difference in treatment’ (Hill 1951: 278)

- In the simplest and ideal case, two groups are constructed that are similar in all therapeutically relevant respects, except for the presence of one component of the treatment (for example, a drug).

- Permits the inference that subsequent differences in the outcomes of the two groups is caused by the presence/absence of that component.
The Logic of Placebo Comparison

In the (paradigmatic) case of a placebo controlled trial (PCT) of a drug treatment we measure the capacity of the drug in the treatment to produce a therapeutic effect – Or, the efficacy of the drug component of the treatment.

PCTs attempt to isolate one component of a treatment that is of interest. Unlike, for example, comparative effectiveness trials, which compare treatments with different components – e.g. rivaroxaban v. enoxaparin for prevention venous thrombotic events after hip replacement.

We can chose to isolate many different components of a treatment – which in the case of some components, may be more or less difficult or perhaps impossible.

There is no reason why the logic of placebo comparison should only apply to measuring the efficacy of the pharmacological components of treatments.

We can do PCTs of surgery, acupuncture... even the branding on boxes of pills.
Where do ‘placebos’ enter in the logic of placebo comparison?

“Branding appeared to supplement both the inert placebo and the active ingredients to produce more relief that with either placebo or active ingredients alone.”

But the example is useful because of the comparisons rather than the result...
Where do ‘placebos’ enter in the logic of placebo comparison?

Branthwaite & Cooper had four treatment groups, labelled as follows:

Branded Aspirin | Unbranded Aspirin | Branded Placebo | Unbranded Placebo

If we’re interested in measuring the efficacy of the branding component, then two comparisons follow the logic set out earlier:
- Branded Aspirin v. Unbranded Aspirin
- Branded Placebo v. Unbranded Placebo

And if we’re interested in measuring the efficacy of the aspirin component, then two comparisons follow the logic:
- Branded Aspirin v. Branded Placebo
- Unbranded Aspirin v. Unbranded Placebo

Equally, two comparisons that don’t follow the logic:
- Branded Aspirin v. Unbranded Placebo
- Unbranded Aspirin v. Branded Placebo

How many of these six are legitimate placebo comparisons?
Where do ‘placebos’ enter in the logic of placebo comparison?

There are three view we might hold:

(1) A placebo is a special kind of object, which must be present along with the right logic.
   - If ‘placebos’ present in a comparison, and the comparison follows the right logic, then we have a legitimate placebo comparison. Otherwise we don’t have, or have an illegitimate, placebo comparison.

(2) Only following the right logic matters.
   - If the comparison follows the right logic, then we have a legitimate placebo comparison. Otherwise we don’t have, or have an illegitimate, placebo comparison.

(3) Only the presence of a special kind of object a ‘placebo’ matters – **Dismiss**.
Problems with (1)
(1) A placebo is a special kind of object, which must be present along with the right logic.

1. Nunn’s arguments:
   How do you know what kinds of object are ‘placebos’?
   - There is no consistent definition of a ‘placebo’.
   - Empirical (clinical and laboratory) research shows that placebo effects can be just as ‘biological’ or ‘active’ as other kinds of therapeutic effects.

2. A further problem:
   How is the division of objects into placebo/non-placebo helpful?
   - That a comparison involves ‘placebos’ is not sufficient to make it a legitimate placebo comparison – but what do we gain in descriptive or evaluative terms, if we think it is necessary?

I claim that the logic of placebo comparison already gives us all we need (and later, claim furthermore that calling some objects ‘placebos’ obscures important questions about the legitimacy of placebo comparisons).
Advantages of (2)
(2) Only following the right logic matters.

1. Better explanation for why placebo groups are set-up a certain way.
   - The placebo group needs to be designed so as to ensure similarity to the intervention group in all but one respect. Why do we sometimes give sugar pills to a placebo group? - To meet the requirement of keeping treatment groups similar in respect of ‘receiving a pill’: not because those sugar pills are ‘placebos’.

Branded Aspirin v. Unbranded Aspirin
Sometimes placebo comparison may involve a placebo group which receives an unbranded-drug-containing-pill as a control, because we are interested in the efficacy of branding on that drug-containing-pill. At other times placebo comparison may involve a placebo group which receives a pill containing only sugar as a control, because we are interested in the efficacy of drug content above the efficacy of pill-receiving.

Not referring to ‘placebos’ allows us to be more specific about the details of the comparison being made.
Advantages of (2)
(2) Only following the right logic matters.

2. Better able to evaluate the legitimacy of placebo comparisons.
   - To perform a good placebo comparison we must ask questions about all the therapeutically relevant aspects of a treatment. There is a danger associated with calling certain objects or procedures ‘placebos’, in so far as this tempts us to forget to check they are genuinely ensuring the required similarity between groups.
Conclusion:

A legitimate placebo comparison is determined by the logic it follows, not the objects it involves.

If a comparison follows the right logic, it is unnecessary and unhelpful to call any objects ‘placebos’.


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