Effect Detectability and Moral Relevance Under Qualitative Comparative Dichotomies: Why Is Policy Formulation, Planning and Evaluation Not Based On Morality Grounds?

By

Lucio Munoz*

***Independent QLC researcher/consultant Email: munoz@interchange.ubc.ca**

Abstract

Morality calls for using total effect detectability or individual effect detectability for policy formulation and planning, not group effect detectability because the moral relevance of total effect detectability and of individual effect detectability is higher than that of group effect detectability. This is one of the conclusions that can be derived when inverting Hansson's morality/indetectability hypotheses(Hansson 1999) through qualitative comparative means as shown in this paper.

However, in practice policy formulation and planning is based on group effect detectability only as total effect detectability and individual effect detectability are not cost-effective in terms of available methodologies and money. Therefore, it is cost-effectiveness, not morality, which determines the use of group detectability techniques to support the formulation of policy and planning. Among the goals of this paper is to show using qualitative comparative tools that the moral relevance of fully detectable or of individually detectable effects is not behind policy formulation, planning and implementation despite having higher moral relevance than that that of group detectable effects because of cost-effectiveness and methodological constraints associated with them.

Key words

Effect detectability, moral relevance, morality indetectability hypothesis, individual effect detectability, group effect detectability, effect detectability model, detectable effects, indetectable effects, detectability hypotheses, indetectability hypotheses, morality ranking, nil and reduction theses.

Introduction

a) Effect detectability

The actions that we take, whether social, economic, or environmental actions have effects that in dichotomy form can be classified as indetectable and detectable. OUP(2005, P. 258) defines the word **detect** as ***"1. discover or perceive the existence of; 2. discover the real(esp. hidden or disguised) character of…."***.

Therefore, detectable is something that can be discovered or perceived or measured. On the other hand, something that cannot be detected then it is indetectable as it cannot be discovered or perceived or measured.

b) Types of effect detectability

Whether the effects of actions are indetectable or detectable, they can be classified in trichotomy form as neutral, positive or negative. A positive exposure is expected to lead to a positive outcome; a negative exposure is expected to lead to a negative outcome; and a neutral exposure is expected to lead to unchanged situations.

However, commonly, indetectable and detectable effects are handled from the dichotomy point of view as positive and negative effects or as significant and insignificant effects or as dominant and non-dominant effects or as strong and weak effects, average and non-average effects depending on the methodology used. For example, ideas on global warming and development can be presented using strong and weak landscape and emission impacts(Muñoz 2004) and Gertler et all(2011) points out that policy evaluations are based on average effects of programs.

c) Sources of effect detectability

Again, whether effects are indetectable or detectable they can be divided in trichotomy form as specific, small N, and large N effects. Specific effects are those which take place at the individual level; small N effects are those that take place at the subgroup level; and large N effects are those that take place at the population level.

Most researchers deal with effects at the dichotomy level of specific effects or large "N" effects as there are some methodological difficulties with traditional research techniques when dealing with small N situations. For example, quantitative and qualitative constructs break down as we approach small N situations(Muñoz 2002).

d) Moral relevance of effect detectability

All effects carry a moral weight, whether they are detectable or indetectable; or whether they are neutral, positive or negative; or whether they work at the individual, subgroup, or at the group level. The moral weight can vary from totally morally negligible to totally morally significant if seen from the indetectable point of view or it can vary from totally relevant to totally irrelevant if seen from the detectable point of view. Hansson(1999) looked at the morality of detectability from the indetectability point of view. This paper is focused on presenting a qualitative comparative framework to deal with effect detectability from the detectable point of view.

To maximize the possibility of comparison with approaches developed by other researchers, the framework will be focused on the moral relevance of negative measurable detectable effects at the individual and group level.

Goals of this paper

This paper has five goals: a) To introduce a set of qualitative comparative tools that can be used to uncover in simple terms the different degree of relevance attached to detectable effects and indetectable effects; b) To show how the inversion of detectable effect hypotheses leads to the indetectable effect hypotheses and their ranking, and visa a versa; c) To indicate how the indetectable effect hypotheses found can be linked to the nil and reduction theses of indetectable effects put forward by Hansson(1999, P. 104) in his article "the moral significance of indetectable effects"; d) To highlight how the inversion of nil and reduction theses of indetectable effects leads to the true and expansion theses of detectable effects; e) To use the above inverted theses to highlight that group effect detectability techniques are cost-effective, but they are not morally superior than total detectability or individual detectability; and f) To highlight that morality is not

the bases for policy formulation, planning, and evaluation because moral actions are not cost-effective..

Methodology

First, the qualitative comparative terminology needed to support the ideas in his paper is listed. Second, a simple effect detectability model(D) is defined and used to determine all possible effect detectability hypotheses and then their moral relevance ranking is indicated. Third, the effect detectability hypotheses are then inverted to produce the effect indetectability hypotheses; and then their moral irrelevance rankings are highlighted.

Fourth, the indetectable effect hypotheses found are then connected to the nil and reduction theses of indetectable effects proposed by Hansson(1999) to create extended versions. Fifth, the extended nil and reduction theses found above are then inverted in order to derived the true and extension theses of detectable effects as the complete opposite hypotheses; and the findings are used to stress that according to the true and extension detectable effect hypotheses found group detectability is less morally relevant than total or individual detectability. Sixth, it is indicated that policy formulation, planning and evaluation is not based on moral actions because morally superior actions are not cost-effective. And finally, some specific and general conclusions are provided.

Qualitative comparative terminology used

I = individual detectability i = individual indetectability

G = group detectability g = group indetectability

D = detectable effects Di = detectable effect "i"

d = indetectable effects di = indetectable effect "i"

NI = nil thesis/ individuals TI = true thesis/ individuals

NC = nil thesis/ groups TC = true thesis/ groups

RI = reduction/ individuals EI = extension/ individuals

RC = reduction/ groups EC = extension/ groups

Types of detectable effects

The presence or absence of individual detectability or group detectability or both at the same time allows us to define the following effect detectability model(D):

1) D = I + G

The above effect detectability model(D) indicates that effect detectability exists when there is only individual detectability or when there is only group detectability or when both at the same time exist. Hence, there are different levels of effect detectability, which are represented in the hypotheses described below:

i) Total detectability(D_1 = IG)

There is total detectability(D_1) when an effect is detectable both at the individual and the group level at the same time.

ii) Individual detectability(D_2 = Ig)

There is individual detectability(D_2) when an effect is only detectable at the individual level.

ii) Group detectability(D_3 = iG)

There is group detectability(D_3) when an effect is only detectable at the group level.

iv) Total indetectability(d_4 = ig)

There is total effect indetectability(d_4) when an effect is indetectable both at the individual and group level at the same time.

v) Levels of moral relevance

The different levels of effect detectability described above can be arranged in order of decreasing moral relevance as follows:

2) $D_1 > D_2 > D_3 > d_4$

The above ranking of moral relevance moves from the position of total moral relevance as indicated by total detectability(D_1) to a position of total moral irrelevance as indicated by total indetectability(d_4). In other words, the detectability ranking goes from the highest moral weight(D_1) to the lowest moral weight(d_4).

Deriving the indetectable effect hypotheses

By inverting the effect detectability hypotheses presented in the section above, we can find the indetectable effect hypotheses. The inversion process simply refers to expressing each the hypothesis in opposite terms, which leads to the following:

i) Total indetectability(d_1 = ig)

Total indetectability(d_1) is the opposite of total detectability(D_1). Hence, an effect is totally indetectable if it is not detectable both at the individual and group level at the same time.

ii) Individual indetectability(d_2 = iG)

Individual indetectability(d_2) is the opposite of individual detectability(D_2). Therefore, there is individual indetectability if an effect is not detectable at the individual level.

iii) Group indetectability(d_3 = Ig)

Group indetectability(d_3) is the opposite of group detectability(D_3). Then, there is group

indetectability is an effect cannot be detected at the group level.

iv) Total detectability(D_4 = IG)

Total detectability(D_4) is the opposite of total indetectability(d_4). Total effect detectability exist when an effect can be detected both at the individual and group level at the same time.

v) Levels of moral irrelevance

The different levels of effect indetectability can be arranged in order of decreasing moral irrelevance as follows:

3) $\mathbf{d_1 < d_2 < d_3 < D_4}$

The above ranking of moral irrelevance moves from the position of total moral irrelevance as indicated by total indetectability(d_1) to a position of total moral relevance as indicated by total detectability(D_4). In other words, the indetectability ranking goes from the highest moral irrelevance(d_1) to the lowest moral irrelevance(D4).

Please, notice that the moral irrelevance ranking shown in expression 3 could have been easily obtained by inverting the terminology and signs in expression 2.

Links to the Hansson's nil and reduction theses

The above indetectable effects hypotheses can be linked to the nil and reductions theses provided by Hansson(1999, P.104), which are listed and discussed below one by one:

i) Nil thesis for individually indetectable effects(NI)

"If an effect is individually indetectable, then it is morally negligible". This implies that the Hansson's nil thesis for individually indetectable effects(NI) is the same as the hypothesis d_2 above, which is expressed below:

4) $\mathbf{NI = d_2}$

ii) Nil thesis for completely indetectable effects(NC)

“If an effect is completely indetectable, then it is morally negligible". This indicates that the Hansson's nil thesis for collective indetectable(NC) effects is the same as the hypothesis d_1 above, which is shown below:

5) $\mathbf{NC = d_1}$

iii) Reduction thesis for individually indetectable effects(RI)

"If an effect is individually indetectable, then it has a lower moral weight than if it were individually detectable". This indicates that the Hansson's reduction thesis for individually indetectable effects(RI) is equivalent as saying that hypothesis d_2 has a lower moral relevance than hypothesis D_2, which is stated below:

6) $\mathbf{RI = d_2 < d_3 < D_2}$

Notice that according to expression 3 hypothesis d_2 has a higher moral irrelevance than hypothesis d_3; and that according to expression 6 hypothesis d_2 and hypothesis d_3 have lower moral relevance than hypothesis D_2.

iv) Reduction thesis for completely indetectable effects(RC)

"If an effect is completely indetectable, then it has a lower weight than if it were individually detectable". This shows that the Hansson's reduction thesis for collective indetectable effects(RC) is equivalent as saying that hypothesis d_1 has a lower relevance than hypothesis D_2, which is expressed below:

7) $RC = d_1 < d_2 < d_3 < D_2$

See that according to expression 3, hypothesis d_1 has a higher moral irrelevance than hypothesis d_2 and d_3; and according to expression 7, all indetectable hypothesis d_1, d_2, and d_3 have lower moral relevance or weight than hypothesis D_2.

Deriving the true and extension theses of detectable effects

i) The true thesis for individually detectable effects(TI)

By inverting the nil thesis in expression 4 above, we get the following:

8) $TI = D_2$

The above expression says that the true thesis for individually detectable effects(TI) takes place when you have individual detectability(D_2). In other words, if an effect is individually detectable, it is morally relevant.

ii) The true thesis for completely detectable effects(TC)

By inverting the nil thesis in expression 5 above, we find the following:

9) $TC = D_1$

The above expression says that the true thesis for completely detectable effects(TC) takes place when you have full detectability(D_1). In other words, if an effect is completely detectable(D_1), it is fully morally relevant.

iii) The extension thesis for individually detectable effects(EI)

By inverting the reduction thesis in expression 6 above, we get the following situation:

10) $EI = D_2 > D_3 > d_2$

Hence, the extension thesis for individually detectable effects(EI) indicates that individual detectability(D_2) is more morally relevant than group detectability(D_3) and individual

indetectability(d_2). In other words, if an effect is individually detectable(D_2), it has a higher moral weight than if it were group detectable(D_3) and/or individually indetectable(d_2).

Notice that according to the moral relevance ranking in expression 2, hypothesis D_2 has higher moral weight or relevance than hypothesis D_3, which is a situation that appears to question in theory the morality of research methods that use group effect detectability only to support planning strategies targeted to individual effects. For example, if one individual is saved or if one individual is affected by a policy, then implementing or not implemented a policy accordingly is a choice that should reflect the morality ranking in expression 10. We know that under group detectability the average individual matters, not specific individuals and this is not consistent with the needs of specific individuals.

In other words, the moral weight of using group detectability(D_3) as the basis to address individual effect issues is lower than the moral weight of individual detectability(D_2) and it is higher than the moral weight attached to individual indetectability(d_2) according to the extension thesis for individually detectable effects. However, in practice cost factors appear to erode the morality ranking stated in expression 10 making hypothesis D_3 / group effect detectability more attractive. So it is cost-effectiveness not morality that is behind the use of group effect detectability in policy formulation, planning and evaluation.

iv) The extension thesis for completely detectable effects(EC)

By inverting the reduction thesis in expression 7 above, we find the following situation:

11) $EC = D_1 > D_2 > D_3 > d_2$

The above extension thesis for collective detectable effects(EC) shows that full detectability (D_1) is more relevant than individual detectability(D_2), group detectability(D_3), and individual indetectability(d_2). In other words, if an effect is fully detectable(D_1), it has a higher moral weight than if it were individually detectable(D_2) only or group detectable(D_3) only or individually indetectable(d_2).

Notice that according to the moral relevance ranking in expression 2, hypothesis D_1 has higher moral relevance than hypothesis D_2 and D_3. At the same time see in expression 11 that hypothesis D_1, D_2 and D_3 have a higher moral weight than hypothesis d_2. Hence, effect detectability has a higher moral relevance than effect indetectability; and total detectability(D_1) has a higher moral relevance than group detectability only(D_3) or individual detectability only(D_2).

Therefore, policy formulation, planning and evaluation based on total effect detectability is in theory the most morally appropriate research tool for effect detectability, but this would required to develop cost-effective research methods that provide consistent general and specific individuals information.

In other words, the completely detectable effect extension thesis above is a call for the development of new and cost-effective research methods capable of producing outputs that reflect group effects consistent with individual effects or vice a versa. Therefore, as long as we cannot develop cost-effective group / individual compatible research outputs the morality ranking presented in expression 11 will be violated; and group effect detectability will still prevail as the preferred tool to support decision-making processes on cost-effectiveness, not moral grounds.

In summary, group detectability based actions are morally inferior than full detectabilitity or individual detectability actions, but they are used because they are more cost-effective in terms of money and methodology. In other words, the reason why policy formulation, planning, and

evaluation are not based on morality grounds is that superior moral actions such as total detectability or individual detectability based actions are not cost-effective options and group detectability based policy formulation and evaluation is.

Specific conclusions

It was highlighted that effect detectability has higher moral relevance than effect indetectability. It was pointed out that in theory, individual detectability has higher moral relevance than group detectability, but in practice cost factors make group detectability a more attractive assessment tool than individual detectability.

And finally, it was stressed that in theory, total detectability has higher moral relevance than group detectability, but in practice it is not cost-effective in terms of money and for the lack of research methods capable of producing generalities consistent with individualities, which again makes group detectability the most attractive technique to use. Hence, methodological and monetary cost-effectiveness overrules morality as the basis for policy formulation, planning and implementation.

General conclusions

First, it was indicated that the issues related to detectability and morality can be viewed from two angles, the indetectable angle and detectable effect angle. Second, it was shown that the qualitative comparative terminology and model presented here provides a simple way to determine effect detectability hypotheses and their moral rankings. Third, it was highlighted that the inversion of these effect detectability hypotheses provides a convenient way to determine the effect indetectability hypotheses and their moral rankings.

Fourth, it was stressed that connecting the indetectability hypotheses found with the nil and reduction theses proposed by Hansson(1999) allows us to establish direct links between them. Fifth, it was pointed out that the inversion of these connected theses permits us to determine easily the true and extension thesis of detectable effects, which are consistent with the original effect detectability model(D) presented in expression 1. And finally, it was established that both the extension thesis for individually detectable effects(EI) and the extension thesis for completely detectable effects(EC) suggest that the current use of group detectability techniques is not morally the best effect detectability option available, but it is the most cost-effective one. In other words, group detectability is used to support policy formulation, planning and evaluation not full detectability or individual detectability because of cost-effectiveness superiority not morality as more relevant moral options are not cost effective in terms of cost factors and methodology.

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