The Frege-Geach Problem and Blackburn's Expressivism

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Abstract

Blackburn has outlined a formal account for moral expressivism, and we argued that the moral Frege-Geach problem can be solved formally by appending two rules for the boo-operator which are missing from his account. We then extended Blackburn's formal account to generate a similar solution to the problem in modal context and showed that the validity of the modal argument can be preserved too in modal expressivism. However, the higher-order element endorsed by Blackburn does not seem necessary for solving the Frege-Geach problem. Nor is his extension from moral expressivism to modal expressivism tenable, since the latter violates its own ontological constraint. A general moral is drawn on the basis on three observations made in evaluating Blackburn's expressivism.

Keywords Expressivism · The Frege-Geach problem · Moral · Modal · Simon Blackburn

1 Introduction

Expressivism about a subject matter is the view that our statements involving terms in that subject matter *merely* express attitudes, and do not describe an objective reality. This view is mentioned and discussed mostly in ethics; hence the expressivist view was almost automatically taken to be a moral view, approaches of which can be found in A. J. Ayer (1936), Rudolf Carnap (1935), Charles Stevenson (1937), and R. M. Hare (1952, 1970). Simon Blackburn (1971, 1984, 1987, 1988) proposed a comprehensive expressivist account that handles the logical structure of attitudes expressed by various

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kinds of terms more generally. But, however general one might construe expressivism to be, it faces an equally general problem, the Frege-Geach problem, which poses a difficulty for expressivism in explaining why some arguments involving certain kinds of vocabularies are valid. This paper focuses on Blackburn's account of expressivism, which claims not only that the Frege-Geach problem to moral expressivism is solvable, but also that expressivism is extendable to the modal realm.

Despite the alluring claims, Blackburn did not offer a clear version of modal expressivism, although he did propose a formal framework drawing on Hintikka's work. In section 2 and 3, we first state what the moral Frege-Geach problem consists in and extend Blackburn's solution to it. In section 4, we try to formulate the modal expressivist account using Blackburn's proposal to the moral Frege-Geach problem. In section 5, we assess the solution and point out why it cannot be carried over to the modal realm. In the conclusion, we make a couple of observations regarding the significance of the results for expressivism in general.

2 The Moral Frege-Geach Problem

According to moral expressivism, moral predicates like 'right' or 'wrong' are used to express approval or disapproval of the speaker. Peter Geach (1960, 1965) argues that, in light of Frege's insight, the validity of some moral arguments cannot be preserved in the expressivist account. For instance, consider the following argument (henceforth referred to as 'the moral argument'):

> It is wrong to tell lies.
> If it is wrong to tell lies, then it is wrong to get your little brother to tell lies.
> Therefore, it is wrong to get your little brother to tell lies.

This instance of *modus ponens* is intuitively valid, and this validity rests on the assumption that the token phrases 'it is wrong to tell lies' in the two premises have the same content. Yet, while the first token phrase can be expressive of a disapproval, the second token phrase, i.e. the antecedent of the second premise, does not seem to express any disapproval at all, for the second premise on the whole does not express any disapproval. Thus, the expressivist needs to come up with a theory in which the semantic contribution of the second token phrase to the second premise is the same as that of the first token phrase, and meanwhile preserves the core idea that moral judgments are mere expressions of attitudes. In general, the expressivist needs to come up with a compositional semantics for expressive vocabularies.[1] One of the most prominent attempts to tackle this task is found in Blackburn (1971, 1984, 1988).

Despite the divergences of the details in Blackburn's publications, there are two gists common to all of his proposals. The first gist is the introduction of two operators for the two major expressive attitudes, namely approval and disapproval. Blackburn (1984: 189-192; 1988: 508) stipulates the hooray-operator '$H!(\phi)$' as referring to approval of

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[1] One of the earliest attempts was made by R. M. Hare (1970). His proposal is essentially compositional semantics for expressivist language, which sets the standard for subsequent proposals. In Schroeder (2008), which is among the most recent attempts, the core of solution is still compositional semantics.

ϕ and the Boo-operator '$B\,!\,(\phi)$' as referring to disapproval of ϕ. The first premise in the moral argument 'It is wrong to ϕ' can be formulated as a first-order attitude '$B\,!\,(\phi)$', expressing a disapproval of ϕ. The second gist is his strategy of analysing compound expressive sentences as higher-order attitudes. For example, assuming that 'ϕ' and 'ψ' do not contain any expressive vocabularies, 'If it is wrong to ϕ, then it is wrong to ψ' expresses the *endorsement* of the coupling of first-order attitudes, so it is formulated as a second-order attitude '$H\,!\,(B\,!\,(\phi) \Rightarrow B\,!\,(\psi))$', which means roughly that I approve that the disapproval of ψ follows upon the disapproval of ϕ.[2] As a result of Blackburn's higher-order view, the second token phrase of 'it is wrong to tell lies' expresses a disapproval, notwithstanding the fact that the second premise on the whole expresses an approval.

The two gists allow Blackburn to formulate the moral argument in the following way:

$$B!(\text{lying})$$

$$H!(B!(\text{lying}) \Rightarrow B!(\text{getting little brother to lie}))$$

$$\text{Therefore}, B!(\text{getting little brother to lie}).$$

The force of Geach's point rests on the intuitive validity of the moral argument. According to Blackburn, if a subject holds both premises but does not hold the conclusion, then her 'attitudes clash', or she has a 'fractured sensibility'; and for any subject whose attitudes are coherent, she must hold the conclusion if she holds the premises. Our intuition of the validity of the moral argument is explained in Blackburn's account as what is required from coherence of attitudes.[3] His account is claimed to have the advantage of respecting this intuition and at the same time reserving a role for subjective attitudes in making or failing to make moral inferences. However, we do not yet know what the formalizations mean, despite the introduction of the two operators. We need to examine his formal account, and this will give us the basis of examining Blackburn's claim that expressivism is extendable to modality.

3 Blackburn's Logic of Attitudes

The first issue requiring clarification in the formulation of Blackburn's formal account concerns the semantics of the right arrow '$\Rightarrow$', which Blackburn (1988: 507-8) uses to signify the *involvement* of one mental state with another. Clearly, it does not behave as

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[2] Our explanation of Blackburn's higher-order approach is based mainly on his (1984: 195). The arrow sign '$\Rightarrow$' first appears in Blackburn (1988: 508).

[3] Such attitude clash was characterized as logical inconsistency in Blackburn (1971, 1984). Later, Blackburn (1988: 510) characterized it as belief inconsistency. Mark van Roojen (1996) objected that no logical inconsistency was involved in Blackburn's translation.

the logical connectives we are most familiar with, because it does not connect indicative statements that are taken as either true or false. However, this is not an irremediable weakness, for in imperative logics it is also not required that the function of '→' operates only on truth-apt sentences. Recently, Peter B. M. Vranas (2008, 2011, 2016) has worked out a promising semantics for imperative logic, and it is very likely that, mutatis mutandis, it can be used as the foundations of Blackburn's logic of attitudes as well.

The second issue is the explication of the expressive operators in Blackburn's logic of attitudes. First of all, Blackburn's logic of attitudes is about the norms that govern the attitudes people should have, not about the attitudes people actually have. He proposes that the logical dual of the hooray-operator 'H!' is the toleration-operator 'T!', that means

$$H!(\phi) \equiv \sim T!(\sim\phi),$$

where '≡' is shorthand for 'is normatively equivalent to'. The duality shows that approving ϕ is normatively equivalent to non-tolerance of not-ϕ.[4] In reality, one might possess the attitude of approving ϕ and the attitude of tolerating $\sim\phi$. This shows not the falsity of the equivalence, but the violation of a fundamental rule of attitude consistency, for if one approves of telling the truth, then one *should* not be tolerant of not telling the truth, and vice versa. Blackburn's logic of attitudes serves the practical evaluative purpose of expressing 'concern for improvements, clashes, implications, and coherence of attitudes.' (1984: 195)

It must be noted that 'H!' and 'B!' are not logical duals, that means 'H ! (φ)' is not normatively equivalent to '∼B ! (∼φ)'. For if it were the case, then, given the law of double negation, '∼H ! (φ)' would have been equivalent to 'B ! (∼φ)', meaning that non-approval of ϕ is equivalent to disapproval of not-ϕ. However, it is well conceivable that one is neutral or decidedly agnostic on a subject matter, as Blackburn admits that there can be attitudes of 'being for or against or neither for nor against things.' (1988: 510) For example, one may neither approve adopting nor disapprove not-adopting without violating any norms of attitudes.

The hooray-operator and the boo-operator can be interchangeably defined by means of the tolerance-operator. It is then reasonable to postulate that tolerance of ϕ is normatively equivalent to non-disapproval of ϕ, which is in turn normatively equivalent to non-approval of not-ϕ, such that:

$$T!(\phi) \equiv \sim B!(\phi) \equiv \sim H!(\sim\phi)$$

This is confirmed by Blackburn when he says, 'corresponding to permission we can have $T!p$, which is equivalent to not hooraying $\sim p$, that is, not booing p.' (1988: 508) The neutral attitude toward ϕ can then be captured as the possession of the attitude of

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[4] Blackburn writes 'If $H!p$ expresses the attitude of endorsing the goal p, $\sim H!p$ then expresses its opposition: tolerating $\sim p$ or allowing it to be consistent with an ideal world. So, we can say that $T!A$ is substitutable for $\sim H!A$, and $H!A$ for $\sim T!A$.' (1988: 511). Two notes are in order. First, the words 'goal' and 'ideal world' indicate that Blackburn's logic is about norms. Second, if '$\sim H!p$' expresses the tolerance of $\sim p$, i.e. '$T!\sim p$', then what is substitutable for '$T!A$' is '$\sim H!\sim A$', and what is substitutable for '$H!A$' is '$\sim T!\sim A$'. Schwartz and Hom (Schwartz and Hom 2014: 834) have the same reading as we have.

tolerating ϕ and the attitude of tolerating not-ϕ, which is permissible in Blackburn's logic of attitudes.

The third issue concerns the validity of the moral argument. Blackburn draws on formal resources from Jaakko Hintikka ([1969])'s deontic logic to fill in the details of his logic of attitudes, specifically the logic of the hooray-operator and the tolerance-operator. The formal system he explicitly laid out can be extended to include the semantic rules for the boo-operator, which appears in the formalization of the moral argument:

$$B!(\phi)$$

$$H!(B!(\phi)\Rightarrow B!(\psi))$$

$$\text{Therefore,}\ B!(\psi),$$

Suppose that L is a set of sentences and L^* is the next approximation to an ideal world. The four rules governing the function of '$H!$' and '$T!$' are as follows:

(i).   If $H!(\phi)\in L$, then $H!(\phi)\in L^*$
(ii).   If $H!(\phi)\in L$, then $\phi\in L^*$
(iii).   If $T!(\phi)\in L$, then the next approximations for L contain ϕ
(iv).   If L^* is the next approximation relative to some set of sentences L, then if $\phi\in L^*$, then $\phi\in L^{**}, L^{***}, L^{****}$, etc.

Blackburn does not include rules for the boo-operator. To handle the moral argument which contains the boo-operator, the following extension is required:

(v).   If $B!(\phi)\in L$, then $B!(\phi)\in L^*$
(vi).   If $B!(\phi)\in L$, then $\sim\phi\in L^*$[5]

Our extension allows Blackburn to tackle the issue of validity regarding the moral argument. Validity is defined in usual manner. An argument is *valid* if and only if the set containing its premises and the negation of the conclusion is unsatisfiable. That means, for the moral argument to be valid, the following set of sentences must be unsatisfiable:

$$\{\ B!(\phi), H!(B!(\phi)\Rightarrow B!(\psi)), \sim B!(\psi)\ \}$$

Unsatisfiability is defined in terms of routes to an ideal. A set of sentences is *unsatisfiable* if and only if each route to a final ideal contains both a formula and its negation.

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[5] This rule is based on Blackburn ([1988]: 508)'s idea that 'The contrary attitude $B!p$ would rule p out of any perfect world.'

Here comes the proof. Let $L = \{\ B\,!\,(\phi), H\,!\,(B\,!\,(\phi) \Rightarrow B\,!\,(\psi)), \sim B\,!\,(\psi)\ \}$.

1. $L = \{\ B\,!\,(\phi), H\,!\,(B\,!\,(\phi) \Rightarrow B\,!\,(\psi)), \sim B\,!\,(\psi)\ \}$	(Premise)
2. $\sim B\,!\,(\psi) \equiv T\,!\,(\psi)$	(Shown above)
3. $L = \{\ B\,!\,(\phi), H\,!\,(B\,!\,(\phi) \Rightarrow B\,!\,(\psi)), T\,!\,(\psi)\ \}$	(By 1, 2)
4. $\psi \in L^*$	(By 3 and rule (iii))
5. $B\,!\,(\phi) \in L^*$	(By 3 and rule (v))
6. $B\,!\,(\phi) \Rightarrow B\,!\,(\psi) \in L^*$	(By 3 and rule (ii))

The step 6 means that either $\sim B\,!\,(\phi) \in L^*$ or $B\,!\,(\psi) \in L^*$.[6] If the first case obtains, namely $\sim B\,!\,(\phi) \in L^*$, then both $B\,!\,(\phi)$ and $\sim B\,!\,(\phi)$ are contained in L^*. If the second case obtains, namely $B\,!\,(\psi) \in L^*$, then it can be inferred by rule (vi) that $\sim \psi \in L^{**}$. Since $\psi \in L^{**}$ by 4 and rule (iv), both ψ and $\sim \psi$ are contained in L^{**}. All routes to an ideal contain two contradictory formulae. Thus, L is unsatisfiable and the moral argument is valid.

4 A Modal Extension

Blackburn's expressivism is not confined to morality but extends to modality as well, as he claims to 'make [expressivism] a recognized option in metaphysics of modality' (1987: 54). He accepts that '$1 + 1 = 2$' is necessary and that 'there exists trees and rocks' is contingent; nevertheless, he insists that the modality involved is merely an expression (or 'projection' in his term) of our mental states. In face of this view, we can formulate a modal argument that is similar to the moral argument, and test its validity using our formalization of Blackburn's modal expressivism.

> It is impossible that $2 > 3$
> If it is impossible that $2 > 3$, then it is impossible that $2 > 4$
> Therefore, it is impossible that $2 > 4$

If Blackburn is correct, there have to be mental states corresponding to and expressed by 'impossible' and 'necessary', just as there are mental states corresponding to and expressed by 'wrong' and 'right'. However, Blackburn has not given the details of such extension, nor does he have an independent account of modality and the mental states involved.[7] If Blackburn recognizes the moral Frege-Geach problem as a problem his moral expressivism must solve, then he must, on the ground of systematic consistency, also recognize the modal Frege-Geach problem as an obstacle that his modal expressivism must overcome.

We will attempt a solution on Blackburn's behalf. Similar to his solution to the moral Frege-Geach problem, two expressive operators can be introduced, namely the necessity-operator 'N!' and the impossibility-operator 'I!', whose logical behavior is

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[6] See Blackburn (1988: 512) for his reading of conditional in this logic.
[7] Ian G. McFetridge (1990: 145) testifies to the same reading of Blackburn's account: '[Blackburn] is agnostic as to whether modal judgments have truth conditions in any substantive sense: whether in making them we are describing any further aspects of reality.'

similar to that of 'H!' and 'B!'. While '$N!(\phi)$' refers to the expression of the attitude when one says 'ϕ is necessary', '$I!(\phi)$' refers to the expression of the attitude when one says 'ϕ is impossible'. If one wants, one can also introduce a possibility-operator 'P!' in modal expressivist logic that is parallel to the tolerance-operator 'T!' in moral expressivist logic.

Note that 'N!' and 'I!' are analogous to 'H!' and 'B!' respectively. Their conceptual relations can be shown by the following equivalences.

$$\text{Moral expressivism}: H!(\phi) \equiv {\sim}T!({\sim}\phi) \equiv B({\sim}\phi)$$

$$\text{Modal expressivism}: N!(\phi) \equiv {\sim}P!({\sim}\phi) \equiv I!({\sim}\phi)$$

Approval of ϕ is equivalent to disapproval of not-ϕ. By the same token, commitment to the necessity of ϕ is equivalent to the commitment to the impossibility of not-ϕ, which also mirrors $\Box\phi \equiv {\sim}\Diamond{\sim}\phi$ in modal logic.

The first premise 'It is impossible that $2 > 3$' can be formulated as a first-order attitude, '$I!(\phi)$'. The second premise 'If it is impossible that $2 > 3$, then it is impossible that $2 > 4$' is to be reformulated as a second-order attitude, '$N!(I!(2 > 3) \Rightarrow I!(2 > 4))$', in order to parallel Blackburn's treatment of 'If it is wrong to tell lies, then it is wrong to get your little brother to tell lies'. The modal argument is recast in a way similar to the moral argument:

$$I!(2 > 3)$$

$$N!(I!(2 > 3) \Rightarrow I!(2 > 4))$$

$$\text{Therefore}, I!(2 > 4)$$

Rules for modal expressivism and the proof of validity of the modal argument are similar to the moral case, except that 'N!' is in place of 'H!', 'P!' of 'T!', and 'I!' of 'B!'.[8]

5 Problems with Expressivisms

Blackburn's approach is distinctively higher-order, whose stances he describes as 'needed in themselves and plausible candidates for the import of a conditional with evaluative elements.' (1988: 507) But this is bewildering since the validity of the moral

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[8] If 'N!' and 'I!' truly mirror '$\Box$' and '$\Diamond$', then the modal argument can be reformulated as '${\sim}\Diamond(2 > 3)$; $\Box({\sim}\Diamond(2 > 3) \Rightarrow {\sim}\Diamond(2 > 4))$; Therefore, ${\sim}\Diamond(2 > 4)$.' Its validity can be proved easily in a normal modal logic whose accessibility relation is both symmetric and transitive.

argument can be preserved without appeal to the higher-order approach. In fact, we can adopt a straightforward translation scheme for normative terms and Blackburn's logic of attitudes[9]:

> ϕ is wrong iff $B!(\phi)$
> ϕ is not wrong iff $\sim B!(\phi)$
> If ϕ is wrong, then ψ is wrong iff $B!(\phi) \Rightarrow B!(\psi)$

The moral argument is obviously valid as it will then be translated as '$B!(\phi)$; $B!(\phi) \Rightarrow B!(\psi)$; Therefore, $B!(\psi)$'.

The only explicit reason Blackburn gives for using the higher-order approach is perhaps to be found in *Spreading the Word* (1984: 193), where he says 'it is quite satisfactory that the conditional expresses a moral point of view.' However, just as the conditional 'If it is wrong to tell lies, then it is wrong to get your little brother to tell lies' is supposed to express a moral point of view, so must also the disjunction 'Either it is not wrong to tell lies, or it is wrong to get your little brother to tell lies' be supposed likewise to express a moral point of view. Yet, Blackburn (1988: 510-1) insists that 'simple disjunction with an evaluative component does not yield an obvious second-order attitude' and that 'Either Johnny has done something wrong, or Freddy has' is not well represented as a second-order attitude, despite that the disjunction seems to be equivalent to 'If Johnny has not done something wrong, then Freddy has'. Perhaps Blackburn is right to point out that, on some occasions, the disjunction of two first-order attitudes does not immediately generate a higher-order attitude. However, the success of his logic of attitudes hinges largely on the account of the relation of *involvement*, but his separate treatment of disjunction only obscures the account.[10]

A caveat about the extension from morality to modality in Blackburn's account is in order. It must be noted that moral expressivism requires its formal account to disallow '$H!(\phi)$' necessitating 'ϕ', yet modal expressivism requires '$N!(\phi)$' to necessitate 'ϕ' in order to conform to our intuitions. This is nevertheless surmountable, for the rules introduced by Blackburn can generate consequences that are similar to the constraints of accessibility relations in modal logic.

The most important problem of Blackburn's modal expressivism is that it violates its own *ontological constraint*, which requires a reduction of modality to mental states. In the moral context, the linguistic sets of L^*, L^{**}, L^{***}, ... in the rules Blackburn introduced are taken to be consistent sets of sentences that represent approximations to an ideal or perfect world. As a result, the formalism underlying Blackburn's moral expressivism, e.g., $H!(\phi)$, and its natural extension to modal expressivism, e.g., $N!(\phi)$, presuppose the notion of possible worlds. This is not a problem for his moral expressivism, but will be a problem for his modal expressivism. To be sure, the problem of ontological commitment may not be a serious problem so long as modal

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[9] This transformation scheme is not fine-grained enough to handle the negation problem, which requires the expressivist logic to distinguish, say, 'Smith believes that giving to charity is *not* required' from 'Smith does *not* believe that giving to charity is required' and 'Smith believes that *not* giving to charity is required.' This problem is formally solvable, as Schroeder (2008), Silk (2015) and Schwartz and Hom (2014) show, though it will demand a substantial amendment to Blackburn's logic.

[10] Blackburn's higher-order approach is a customary target of criticism, for example Mark van Roojen (1996) argues that the higher-order account overgenerates valid arguments.

concepts are admitted to be irreducible. However, precisely this move cannot be so easily adopted by the expressivists, because modal expressivism is precisely constrained to circumvent the existence of possible worlds by reducing them to mental states.[11] Surely one may remain quiet regarding the ontological nature of modal idioms, but one can hardly apply the same policy on the use of 'possible worlds'. Since the original proposal by Leibniz, the idea of possible worlds is ontologically tinged, as he claims that 'there is a certain urgency (*exigentia*) towards existence in possible things or in possibility or essence itself – a pretension to exist, so to speak – and in a word, that essence in itself tends to exist.' (Leibniz 1989: 487) Taken at its face value, the notion of possible worlds requires ontological commitment too.

It might be argued that the possible world idiom might be ontological-sounding but it actually needs not carry any ontological commitment. For example, some might read 'possible worlds' as consistent sets of propositions or mere fictions. However, such approaches are either unsatisfactory or unavailable to modal expressivism. On the one hand, there are two readings of consistency. If consistency is taken in a formal reading, as in Carnap's state description, then some apparently impossible worlds would be rendered possible, since even 'There is a colourless red pen' is formally consistent. If consistency is taken in a substantial reading, then 'There is a colourless red pen' will be ruled out as inconsistent, but the notion of consistency will have to involve the notion of possibility, e.g. a set of propositions is consistent just in case it is *possible* for all propositions of the set to be true at the same time. This move amounts to smuggling the notion of modality, which is supposed to be replaced by expressivist terms in the project of modal expressivism, into the notion of consistency. On the other hand, if one takes possible worlds as mere fictions, then since fictions do not *actually* exist, one still has to explain what ontologically these possible world fictions are, or otherwise modality is left unexplained. All of these resemble Blackburn's Euthyphro dilemma about the origin of modal status: 'Either the explanandum shares the modal status with the original, and leaves us dissatisfied, or it does not, and leaves us equally dissatisfied.' (1993: 54)

The problem of the ontological commitment of the notion of possible worlds is perhaps boiled down to the fact that Blackburn never clearly explains what kind of mental states correspond to which type of modal notions, e.g., what corresponds to '$N!(\phi)$', except that he explicitly objects taking necessity idioms as expressing a state of certainty (Blackburn 1987: 63), and unlike the case of approval and disapproval in moral expressivism, we do not even have the faintest idea about the mental states expressed by modal notions.

6 Conclusion

Three observations can be made here. First, our discussions above show that Blackburn's expressivism has to make use of the notion of possible worlds. This is by no means an aberration. The use of possible world semantics is rather common in

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[11] Here we thank the anonymous reviewer for pointing out that being ontologically committed to possible worlds might not be problematic for someone who takes modal concepts to be irreducible.

contemporary approaches to formalizing expressivism, such as Alan Gibbard (1990), James Dreier (2006), Ruth Weintraub (2011), and Alex Silk (2015). Second, Blackburn holds the expressivist view on more than one topic. Indeed, expressivism can take different subject matters as its concern. Besides the most popular expressivist topic viz. normative terms like 'ought', 'wrong', 'good', 'bad', etc., there are other topics giving rise to other expressivist accounts, such as R. M. Hare (1952, 1970) on 'ought', Gibbard (1990) on 'rational', Hartry Field (2000) on 'a priori', Huw Price (1983) on 'probably', Seth Yalcin (2007, 2012) on 'might'. Third, the Frege-Geach problem can likewise be formulated on different subject matters. For example, one can easily generate the Frege-Geach problem in an aesthetic context: 'Picaso's Weeping Woman is ugly. If Picaso's Weeping Woman is ugly, then his Dora Maar au chat is ugly. Therefore, Picaso's Dora Maar au chat is ugly.' It shows that the Frege-Geach problem is a general problem for expressivism.

The general moral to be drawn is that, as there must be a form of Frege-Geach problem to each topic of expressivism, if one is to adopt the possible world semantics to solve the Frege-Geach problem, then one cannot at the same time be a modal expressivist. Therefore, given Blackburn's way of framing the solution to the Frege-Geach problem in moral context, his expressivism cannot be a viable option in the metaphysics of modality as he claims. The underlying concern is not motivated by questions about the foundations of morality, but rather by meaning-theoretical concerns with attitudinal vocabularies that express mental states, regardless of which philosophical domains the vocabularies belong to. Recognizing the generality of the Frege-Geach problem has a profound implication. It offers a general scheme of challenge to expressivist views that seek to reduce the talk of certain subject matter to mental states. If such reduction is a procedure characteristic of noncognitivism, then the Frege-Geach problem is the touchstone of all forms of noncognitivism that appeal to psychologies. Should this be the case, then not only the Frege-Geach problem but also the formal-semantical attempts to solve it can find broader usage.

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