

# Intention and Motor Representation in Action Explanation

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## 1. The Possibility of Purposive Action

What is the relation between a purposive joint action and the outcome or outcomes to which it is directed?

## 2. In outline

[A] Like intentions, motor representations (i) represent outcomes, (ii) coordinate actions and (iii) do so in ways that would normally facilitate the occurrence of the represented outcomes.

[B] Unlike intentions, motor representations do not have a propositional format.

[C] Motor representation has a distinctive role in explaining the purposiveness of action (from [A] and [B]).

[D] There is a problem about how intention and motor representation can be harmoniously integrated ('The Interface Problem').

[E] The solution to this problem involves constituents of intentions which refer to actions by deferring to motor representations.

[F] Maybe where an intention properly and reliably produces bodily movement, either acting on that intention involves a further intention or else

the intention involves concepts which refer to actions by deferring to motor representations.

[G] Intentionally acting in the world may ultimately depend on motor experience.

## 3. Motor representation can ground purposive action (§2.A)

Motor representations carry information about outcomes.

Action planning depends on information about outcomes.

Therefore, motor representations represent outcomes.

## 4. Motor representations aren't intentions (§2.B)

1. Only representations with a common format can be inferentially integrated.
2. Any two intentions can be inferentially integrated in practical reasoning.
3. My intention that I visit Paris on Friday is a propositional attitude.
4. All intentions are propositional attitudes (from 1–3).
5. No motor representations are propositional attitudes.
6. No motor representations are intentions (from 4, 5).

## 5. The Interface Problem (§2.D)

Two outcomes, A and B, *match* in a particular context just if, in that context, either the occurrence of A would normally constitute or cause, at least partially, the occurrence of B or vice versa.

Two representations of outcomes are *in harmony* in a particular context if the outcomes they represent match in that context.

Some actions involve both intention and motor representation.

In some cases, an intention and a motor representation are non-accidentally in harmony.

How is non-accidental harmony ever possible?

A natural way to answer this question would be by appeal to a process of planning or practical reasoning. But intention and motor representation cannot be inferentially integrated (because they differ in format).

## 6. Demonstrative action concepts (§2.E)

There are demonstrative concepts of actions.

A demonstrative concept can refer to an action by deferring to a pantomime of an action.

A demonstrative concept can refer to an action by deferring to a *mental* pantomime of an action.

Experiences involved in actually acting, like those involved in mentally pantomiming an action, can ground the possibility of demonstrative reference to action by deference to motor representation.

Some concepts are constituents of intentions and refer to actions by deferring to motor representations.