Perceptual Guidance

Sebastian Watzl
Harvard University, Department of Philosophy & MBB
The Stream of Consciousness

The Tiger Experience

The Gun-shot Experience

The Pop-Up Experience
What does experience tell you?

- These experiences tell you *what is there*:
  - There is something yellow and striped (maybe: *this* is yellow and striped, it is a *tiger*, it is dangerous).
  - There is a sudden change in color from black to red.
  - There is a loud, high pitched sound.

- My claim: they tell you *what to do*:
  - Look at that!
  - Listen to that!
  - In general: focus attention on that!
What does experience tell you?

- Perceptual experience seems to be informing:
  - In this respect like belief.
  - Represents your environment as being a certain way.
  - Is thetic and has correctness conditions.

- Perceptual experience is also guiding:
  - In this respect like desire.
  - Guides your activities.
  - Is telic and has satisfaction conditions.
Experiential Guidance

Some conscious (perceptual) experiences are such that the agent simply in virtue of having those experiences is guided to act (= some experiences are guiding)

The Weak Claim

All conscious experiences (perceptual or not) are such that the agent simply in virtue of having those experiences is guided to act (= all experiences are guiding)

The Strong Claim
Phenomenal Salience

The tiger experience, the pop-up experience and the explosion experience share a phenomenal property, which I shall call *phenomenal salience*.

Phenomenally salient experience are guiding experiences; they guide (involuntary) attention: you attend to, say, the tiger because your experience of it is phenomenally salient.

→ The Weak Claim

- Phenomenal salience comes in degrees, and all experiences are phenomenally salient to some degree.

→ The Strong Claim
Phenomenal Salience

- Phenomenal Salience (here):
  - Roughly what causes and causally sustains attention.
  - *not*: how something is experienced when you attend to it. What doesn’t “pop out” is not salient even when you decide to attend to it.

Find the man in the upper right hand corner and focus your attention on him!
Towards the strong claim

**Involuntary Attention**  You are attending to something involuntarily iff (roughly) you are attending to it not because you want to, decided to, intended to, are trying to, etc.

**Examples:**
- An object, property or event in your environment catches or grabs your attention (our three experiences) — “Forceful”
- Your attention drifts or wanders to an object, property or event in your environment.
- A mental image, itch or pain grabs your attention (or “pops into your head”)
- Your mind wanders to unbidden thoughts, ideas, images, itches, pains, etc.

**Outward directed**

**Inward directed**
Why Phenomenal Salience?

- Case for experiential guidance strong and immediately compelling.
- Philosophical argument can be grounded in empirical research.
- Case for experiential guidance can be made independently of other controversial claims.
- Generality makes the phenomenal salience case the most plausible candidate for establishing the strong claim.
- Investigation of phenomenal salience may provide a foundation for talk about salience in other areas.
Overview

- What experiential guidance is and what it is not.
- An argument that phenomenal salient experiences are guiding.
- An account of experiential guidance
- A foundation for salience talk?
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Experiential guidance ...

... is the claim that ...

1. Experiences (of the relevant kind) directly cause and causally sustain some of the agent’s activities.
   - the agent need not desire, intend or try to do what she does.
2. What it is to be an experience (of the relevant kind) implies a disposition to cause and causally sustain some of the agent’s activities.

- The relevant causal power is not an accidental feature of (a specific instance of) the relevant experiences.

- Contrast: feeling a headache causes you to drop a glass.
3. Being guided by an experience (of the relevant kind) minimally rationalize the activity it guides (i.e. the experience is not a *brute* cause.)

- Not fully intentional action (since independent of desires, intentions or tryings).
- But also not like a mere reflex: guided, after all, by something that shows up in your own point of view as guiding.
- This in part is what distinguishes experiential guidance from un-conscious guidance (e.g. by unconscious processing in the “dorsal stream”)

**Experiential guidance ...**

**... is the claim that ...**
Experiential guidance ...

... what others say

[Il]nkstand, pen, ink, paper, blotting pad, table, lamp, furniture, windows, doors, room [...] never show themselves proximally as they are for themselves [...] The hammering itself uncovers the specific 'manipulability' of the hammer. The kind of Being which equipment possesses [...] we call "readiness-to-hand". When we deal with them by using them and manipulating them, this activity is not a blind one; it has its own kind of sight by which our manipulation is guided and from which it acquires its specific Thingly character.

(Heidegger, Being and Time p. 98)
Merleau-Ponty’s proposal is radical and strange: I experience the distance to the object normatively, in terms of how well it allows me to see the size; this distance requires me to get closer to see the size better, now I am required to back away. [...] Every experience of size or shape is not just the perceptual representation of a property. Rather, the experience already involves a kind of normative self-referentiality: It is part of the very experience of the size of an object that I am drawn to improve the experience by changing my distance to the object. (Kelly 2010, p. 148f)
Consider a tennis swing. If one is a beginner or is off one's form one might find oneself making an effort to keep one's eye on the ball, keep the racket perpendicular to the court, hit the ball squarely, etc. But if one is expert at the game, things are going well, and one is absorbed in the game, what one experiences is more like one's arm going up and its being drawn to the appropriate position, the racket forming the optimal angle with the court - an angle one need not even be aware of - all this so as to complete the gestalt made up of the court, one's running opponent, and the oncoming ball. One feels that one's comportment was caused by the perceived conditions in such a way as to reduce a sense of deviation from some satisfactory gestalt.

Experiential guidance ...

... what others say
Many years ago I used to ride a motorcycle around London [...] One time I was stopped by a policeman, who asked me "Do you know how fast you were travelling?" [...] I was unable to tell the policeman my speed, yet surely I did know [...] The speed was presented to me as a certain way of wiggling through and around heavy traffic [...] as a felt rotational pressure in my right hand as it held the throttle grip [...] a felt vibration of the road and a rush of wind, a visual rush of surfaces, a sense of how the immediate environment would afford certain motions and resist others; embodied and environmental knowledge of what it would take to make adjustments in these felt pressures and sensitivities. (Cussins,
Experiential guidance ... 
... is not the claim that...

1. Experience represents affordances.

- affordance properties, like being reach-able, being step-on-able, being close-to-hand, being edible, etc. might be represented by perceptual experience (see Nanay forthcoming)

- But “Facts about what affords what, however, are not what we are directly open to according to Heidegger and Merleau-Ponty. [...] It is the affordance’s solicitations – such as the attraction of an apple when I’m hungry – to which I am directly open. (Dreyfus 2007, p. 257f)

- Experientially representing affordances is not sufficient for experiential guidance.
2. Embodiment is essential to experience.

- Even in the case of experiential guidance of *bodily action* the body is only essential for the *success of guiding experiences* (a brain in the vat might still have guiding experiences, and receive misleading “bodily feedback”).

- In any case: I am interested in experiential guidance of mental activity, i.e. paying attention to what you are experiencing.

- The body might be causally implicated in this guidance, but is not essential.
3. Experience has normative content.

- Your experience might represent that you ought to move in some way, but you are not guided to move in that way (if “motivational externalism” is true, normative judgments/beliefs/experiences (?) need not be action guiding.

- Better think of the the normativity involved as the one that comes with rationalizing activities that aren’t “blind”.

... is not the claim that...
Experiential guidance ...

... is not the claim that...

3. Experience has normative content.

- Could still argue that experiential guidance is best explained by representing normative properties (if “motivational internalism” is true, normative judgments/beliefs/experiences (?) must be action guiding.)
Experiential guidance ...

... is not the claim that...

2. An anti-intellectual account is true of (expert) skill.

- Experiential guidance is involved even in non-expert activities.

- Experts might (for all I am going to say) still need to draw on propositional knowledge about how to do certain things.

- This knowledge might indeed feed back into their experience and lead to the kinds of experiential guidance skilled agents often do seem to experience.
Overview

- What experiential guidance is and what it is not.
- An argument that phenomenal salient experiences are guiding.
- An account of experiential guidance
- A foundation for salience talk?
Why think phenomenal salience is guiding?

First Claim

Phenomenally salient experiences directly cause and causally sustain your attention to the objects of those experiences.

- You attend to the (intentional) object of those experiences, even though you do not desire to, intend to, or try to.

- Implausible to claim that there is some kind of hidden desire, intention or trying (more implausible than in the bodily cases, I submit). Attention capture happens paradigmatically against your will.
An Objection

Why think that experience plays any causal role? Isn’t involuntary attention caused and causally sustained by sub-personal mechanisms?

- A plausible sub-personal candidate:
  - salience maps in various parts of the cortex that function as control mechanisms for (especially involuntary) attention.*
  - In particular such maps have for example been extensively described in the Posterior Parietal Cortex (PPC). Its homologue in the monkey (the Lateral Interparietal Cortex, LIP) has been extensively studied electrophysiologically.**


**See review in Gottlieb (2007)
better think of LIP salience maps as underlying phenomenal salience
- receive both bottom-up as well as top-down input:
  - are modulated by low-level stimulus features, as well as task-relevance, familiarity, etc.*
- contain a “sparse” representation of the visual environment (i.e. strong response only to contextually relevant/salient stimuli within the receptive field).*
- strong(est) activity predicts and precedes attention shifts (and saccades) to where the area/neuron codes for.** There is inhibition for locations that are already attended.***

*** e.g. Balan and Gottlieb (2006).
Reasons for thinking that the personal level is involved:

- Unlike in the case of reflexes, you are (involuntarily) attending (while you are not moving your leg: it moves).
- Unlike in the case of reflexes, there is certain kind of answer to “why are you attending to it?”
- *There is a semantic connection* of talk of attention “capture” and essential reference to the first person: it caught my eye, it grabbed me, it struck me, I felt drawn to it, etc.
- *There is a phenomenology* of feeling drawn to something, something’s striking you, etc.
Why think phenomenal salience is guiding?

- **Second Claim**

  Necessarily: if you have a phenomenally salient experience \( x \), then you are disposed to attend to \( x \).
A Contrast

Compare

1. Feeling your hand as cold causes you to scratch your hand.
2. Feeling your hand as itchy causes you to scratch your hand.
3. Experiencing a sound as being loud and high-pitched causes you to attend to that sound.
4. A phenomenally salient experience of a sound causes you to attend to that sound.

The causal/motivational power of the experiences in (1) and (3) is inessential to their phenomenology. You could have experiences with that phenomenology that fail to have those causal powers.

By contrast, the causal/motivational power of the experiences in (2)* and (4) is essential to their phenomenology. You could not have experiences with that phenomenology that fail to have those causal powers.

A Contrast

In fact: phenomenal salience seems to be better candidate than itchiness:

Maybe there could be a pathology where the patient’s hand feels itchy and yet she is not disposed to scratch?
(if someone told me of such a patient, I would take it as an interesting discovery about itches)

Hard to see, though, how there could be a pathology where something is phenomenally salient for the patient and yet she is not disposed to attend to it.
(if someone told me of such a patient, I would think that they don’t mean what I mean by salience)
Why think phenomenal salience is guiding?

Third Claim

Being guided by phenomenally salient experiences minimally rationalizes your attending

Being caused and causally sustained by a phenomenally conscious event whose nature it is to be so causing and causally sustaining (because of the second claim) goes a long way to argue for the third claim

It is, at least as good, it seems to me, as functional role accounts of desire are to explain why desires may rationalize action).
An indirect argument

The indirect argument

1. If an agent S’s $\phi$-ing is sensitive to her goals, desires and motivations, then that $\phi$-ing is minimally rational for S.

2. Attending to something because it is phenomenally salient is sensitive to her goals, desires and motivations,

Thus, Attending to something because it is phenomenally salient is a minimally rational activity.
Empirical Support for Premise 2

“[...] LIP provides a “salience representation” of the external world – a topographic visual representation that encodes the locations of salient or behaviorally relevant objects. Recent neurophysiological experiments show that this salience representation incorporates information about multiple behavioral variables – such as a specific motor response, reward, or category membership – associated with the task-relevant object.” (Gottlieb 2007, p. 9).*

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How to explain phenomenal guidance?

- **The Content Model**
  - Account for guidance in terms of content.
  - Advantages:
    - easy to see how experience can be both informing and guiding.
    - easy to explain why guiding experiences are minimally rationalizing.

- **The Manner Model**
  - Account for guidance in terms of mode/manner.
  - Disadvantages:
    - harder to see how experience can be both informing and guiding.
    - harder to explain why guiding experiences are minimally rationalizing.
The Content Model

- **Descriptive Contents**
  - The relevant content is descriptive.
  - E.g. <Red(This), Objectively Salient (This)>
  - Or: <Red(This), I attend to (This)>
The Content Model

A. Against descriptive contents

There is no purely descriptive property $D$ such that you have a phenomenally salient experience of $x$ in virtue of experientially representing $x$ as $D$.

One reason: $D$ would be an oddly relativized property

Another reason: unlike, say, redness, $D$ doesn’t phenomenally seem to be a property experience represents

The main reason, though, is this:

someone could have an experience that represent $x$ as $D$, and yet she is not disposed to attend to $x$ (the Humean Argument)
Compare: there is no descriptive property D such you desire x in virtue of experiencing/believing that x is D.

1st Caveat: how about the property being desired by you (and correspondingly: being experienced phenomenally saliently by you)? This property is ruled out by the clause in virtue of.

2nd Caveat: how about the property being desirable? I think that Humean arguments show that if it is to explain your desiring x, x’s being desirable can’t be a descriptive property.
The Content Model

- An response to Hume’s argument: being desirable = being good or desire-worthy (i.e. a normative property)

- The idea applied here: you have a phenomenally experience of x in virtue of experiencing x as worthy of attention (The Normative Content View)
The Content Model

- The Normative Content View

  - The relevant content is normative
  - E.g. \( \text{Red(This), I should attend to (This)} \)
B. Against the Normative Content View

There is no normative property $N$ such that you have a phenomenally salient experience of $x$ in virtue of experientially representing $x$ as $N$.

One reason: maybe there are no normative properties! (what it is to make a normative judgment rather gets explained in terms of a certain type of response to that thing)

Reply: if non-reductive representationalism about experience were correct, then the relevant properties could be response-dependent properties (like Shoemaker’s appearance properties): what it is to have a phenomenally salient experience and what it is to be experienced as attention-worthy might be co-dependent.
The Content Model

An better argument against the normative content view:

1. If you experience \( x \) as \( F \), and believe that \( x \) is not \( F \), then your experience contradicts your belief.

2. If the normative content view were correct, then if you have a phenomenally salient experience and you believe that \( x \) is not worthy of attention, you experience \( x \) as \( F \) and believe that \( x \) is not \( F \).

Thus,

3. If the normative content view were correct, then if you have a phenomenally salient experience and if you believe that \( x \) is not worthy of attention, your experience contradicts your belief.

But,

4. A phenomenally salient experience of \( x \) does not contradict your belief that \( x \) is not worthy of attention (it rather conflicts with your trying or desiring not to attend to it)
The Manner Model

Video from Laurent Itti’s lab: http://ilab.usc.edu/bu/movie/index.html
The Manner Model

- Formal Procedure:
  - Divide your total (perceptual, visual?) experience into parts:
    - \( E = \{e_1, e_2, e_3, \ldots\} \)
  - Rank the parts by their likelihood of a shift of attention to the object of that part of experience. We get an ordered sequence of experiences.
    - \( E = \langle e_3, e_7, e_1, \ldots \rangle \)
  - Shift the focus of attention to the first member in that sequence.
The Manner Model

For Image-like Experiences
The Manner Model

For non-Image-like Experiences

Tiger-experience

Pop-up-Experience

Wood-Gist-Experience

Explosion-experience

Water-sound-experience
The Manner Model

- Interpretation (first ideas):
  - **Experiential resistance**: experiences don’t like to be peripheral, they want to be at the center of attention. Phenomenal salience measures *how much* an experience resists peripherality.
  - **Experiential desires**: think of phenomenally salient experiences themselves as desires to attend. To see a tiger in a phenomenally salient way is the *experiential and non-conceptual analogue of wanting* to focus on the tiger.
    - experientially-desiring to A should stand to desiring to A like experientially-representing p stands to believing that p.
  - Phenomenal salience measures how much you experientially-desire to attend to an object.
The Manner Model

- Advantages:
  - Can explain why having a phenomenal salient experience implies a disposition to attend (in the same way as a desire to attend implies a disposition to attend)
  - Can explain why having a phenomenally salient experience of, say, a tiger while at the same time desiring not to attend to the tiger get into conflict (in the same way as experiencing something as being bent while believing that it is not bent get into conflict)
  - Can explain why having a phenomenally salient experience of, say, a tiger does not contradict your belief that you should not to attend to the tiger (in the same way as desiring to have a drink and believing that you should not have a drink do not contradict each other)
  - Can explain why experiential guidance is minimally rationalizing (your desire may influence your experiential-desires like your perceptual informational states may influence your beliefs)
The Manner Model

Problems

Problem 1: Can’t explain why phenomenally salient experiences are also informing. In the tiger experience there is some way the world is represented as being

Problem 2: Is ad hoc. Seems to be just stipulation.
The Manner Model

- Adressing problem 1
  - Phenomenally salient experience combine experiential representation with experiential desires.

You have a phenomenally salient experience of x as F iff
  - you experientially-represent x as F.
  - you experientially-desire to attend to x.
The Manner Model

- Adressing problem 2
  - In previous work I have argued on independent grounds that we have reflexive awareness of our own attending
  - non-conceptual awareness of you yourself attending to something.
  - explains how why we are in a position to know what we are attending to (if we reflect).

- Suggestion:
  - Think of experientially-desiring to attend to x = reflexive awareness of attending to x.
  - Reflexive awareness of attending to x causes and causally sustains your (involuntary) attending to x.
Performatives

- “The meeting is now adjourned”
- “I name this ship ‘Queen Elizabeth’
- “You are now under arrest”
- ..... 
- “I am now attending to this”
The Manner Model

- Reflexive awareness of attending to x is non-conceptual awareness of <I am attending to x>.
- Reflexive awareness of attending to x is a ground of the disposition to attend to x.
- Reflexive awareness of attending to x is satisfied iff you are attending to x.
- Reflexive awareness of attending to x is correct iff you are attending to x.
You have an experience of x as F that is phenomenally salient *iff* 
- you experientially-represent x as F.
- you reflexively aware of attending to x

You have an experience of x as F that is phenomenally more salient than your simultaneous experience of y as G *iff* 
- you experientially-represent (x as F & y as G)
- you reflexively aware of (attending to x more than attending to y)
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A foundation for salience talk?

- Salience plays important explanatory roles in at least the following areas
  - Bounded Rationality
    - The salience of some option or outcome may affect what utility you assign to it (at least: how likely you choose it).
    - The salience of some state of affairs may affect what credence you assign to it (at least: how likely you are to bet on it).
  - Intuitive Reasoning
    - System 2: slow, effortful, controlled, neutral and rule-governed
    - System 1: fast, effortless, largely automatic, emotional and associative and driven by salience.
A foundation for salience talk?

- Salience plays important explanatory roles in at least the following areas
  - Coordinated Action
    - Equilibrium solutions to coordination games are fine. But *these solutions need to be salient* to be helpful for solving coordination problems.
  - Linguistic Communication
    - *Salience contracts, expands and shapes the common ground* that in part determines what a speaker may mean by uttering a certain sentences in a certain context
A foundation for salience talk?

- Here salience gets ascribed to mind-independent entities:
  - options
  - states of affairs
  - propositions
  - solutions
  - facts
  - events, objects, properties
A foundation for salience talk?

- What we should not expect:
  - an account of what all salient “things” have in common (independently of us)

- What we should expect:
  - an account of the role salience plays in our cognitive architectures.
A foundation for salience talk?

Salience is response-dependent. We can define it in terms of phenomenal salience:

**Objectual Salience**

In context C, object, event or fact x is objectually salient for subject S in virtue of the fact that in C S has a conscious experience of X in which her experience of x is phenomenally salient.

**For example:**

The tiger is salient (in the context ...) in virtue of the fact that in that context your experience of the tiger (where it appears stripy, orange, etc.) is phenomenally salient.
There is also a dispositional notion

Dispositional Salience
An object, event or fact $x$ is dispositionally salient for subject $S$ or the subjects in a group $\Sigma$ in a set of contexts $\mathcal{C}$ just in case $S$ or the subjects in $\Sigma$ are disposed to have a phenomenally salient experience of $x$ in that set of contexts $\mathcal{C}$.

For example:
Tigers are dispositionally salient (in the context ...) in virtue of the fact that in that context most people tend to experience tigers in phenomenally salient ways.
A foundation for salience talk?

- So, if what I have argued is right, then experiential guidance lies at the heart of many important areas in philosophy and the cognitive sciences: phenomenally salient experiences guide and re-direct our attention.

- They do so in a minimally rationalizing way and interact with the agent’s overall motivational set.

- Activities from intuitive reasoning to linguistic communication, though not intentional actions and guided by explicit rules, may thus still be agential, and within the reach of rationality.
The End

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