

### The first round of review

Reviewer: Arthur Shapiro  
 Completed: 2020-11-02 08:13 PM  
 Recommendation: Revisions Required

#### Reviewer Comments

For author and editor

Anstis has made, yet again, a series of compelling contrast-related motion illusions. The illusions are worth displaying in the first issue of the Journal of Illusion. However, the descriptions are terse and don't really do justice to the effects.

Here is what I believe would be advisable: an introductory section that gives the reader more context. The author, of course, knows the art of these illusions more than anyone. It would be wonderful if the first article in the Journal of Illusion shared his perspective on these illusions. In this instance, a personal reflection about contrast motion illusions in general would be more valuable and more interesting than a standard academic intro, but I will be happy to have a revised version that provides more context about the illusions for the reader.

Presentation order: Movies 2 and 3 show very strong and compelling effects. Movies 1 and 4 are explanatory, and figure 5 is both explanatory and an extension to the contrast-contrast domain. I won't insist on it, but I suggest a different order to improve the narrative:

Introduction of enhanced motion: movie 2 and movie 3

Enhanced motion is dependent on contrast (movie 4)

Enhanced motion is not the same as reversed phi (movie 1)

Enhanced motion can also be done for contrast-contrast (movie 5)

I like the concluding section, which rules out mechanisms instead of proposing mechanisms. Indeed, it might be worthwhile for the Journal to stress this type of approach.

#### Specific Comments:

The introduction is sparse. For a first article in the journal, it would be nice to have a more contextualization and some history.

I hate to say this, but I do not see the image in column b moving "briskly and through a greater distance

than a.” To me, a and b seem to move in unison with each other, and cover the same distance. I can convince myself there is a small effect if I make the display very large, and cover up c.

The two paragraphs that start with “Movie #1” are repetitive. I presume one is the figure caption, which could be visually differentiated.

Movie #2 is a very strong effect. The paper would be more convincing if it started with this demo instead of with Movie #1. The text seems a little sloppy, and there is redundancy from the figure captions.

Movie #3. Very cool. Very strong effect; even better than Movie #2.

Movie #4. I get the point of the demo, but the various transitions are hard to follow. It might be worth redoing the movie with multiple rows. Or perhaps 4a and 4b.

Movie #5. I suppose the middle square moves a little more than the other ones in the top row, but similar to movie 1, I don't find the effect overly compelling.

Reviewer: George Mather

Completed: 2020-11-17 06:49 AM

Recommendation: Revisions Required

#### Reviewer Comments

For author and editor

The paper is a largely phenomenological report on some motion illusions that form part of a class of illusions based on the displacement of simple patterns combined with modulation of the luminance and contrast of the pattern elements. Different variants of the illusion class produce nulled or enhanced impressions of movement. In this case the modulation enhances the appearance of motion.

The demonstrations are very effective, and the paper presents some preliminary data based on two observers, though methodological details are relatively brief.

The paper could stand on its own as a brief initial report of some new phenomena in motion perception, though there is scope for more detail on methods. There is also no discussion of the theoretical implications of the new effect: Can the same mechanisms proposed to explain the related effects also

work for the new ones, or are new theories required?

### The second round of review

Reviewer: Arthur Shapiro  
 Completed: 2021-03-01 07:00 AM  
 Recommendation: Accept Submission

#### Reviewer Comments

For author and editor

The introductory comments were exactly what I was hoping for regarding Antsis' history with reverse phi phenomenon, luminance and motion. The effects are strong and the historical context is valuable.

It might be worth reviewing the text with an editor prior to final submission. Some of the sentences had an extra period, missing a comma, etc.

Reviewer: George Mather  
 Completed: 2021-02-22 02:35 AM  
 Recommendation: Accept Submission

#### Reviewer Comments

For author and editor

The expanded text is very valuable as a record of some of the perceptual phenomena discovered by Stuart Anstis, with fascinating insights into the creative process behind them.

The demonstrations work convincingly well and make an interesting contribution to the literature and to Stuart Anstis's catalogue of discoveries. The effect strikes me as counterintuitive. The time sequences for movie #5 on page 10 are particularly perplexing. If one just considers frames 3 and 4 in the sequence, there is no qualitative difference between b (enhanced motion) and c (reverse phi) in that both involve a transition from negative contrast in frame 3 to positive contrast in frame 4. The only difference is a quantitative one, in terms of the magnitude of contrast. Yet the full frame sequences appear different, perhaps because the other frame transitions in the enhanced motion sequence overcome this brief interruption in the 3-4 transition. In 'smooth' sequences there is no direct transition across a polarity reversal in the enhanced motion sequence, and this may contribute to stronger effects in these sequences (though of course over a longer time period contrast still reverses).

There are just a few minor typos that need to be ironed out. The two that caught my eye were the word

“mkoved” on page 9, and the description of Bridget Riley as “Brutish” (I suspect the intended word was “British”).