The role of inspiration in artistic creation

Takeshi Okada

(University of Tokyo)
Our framework for studying creativity

To support creative cognition:
- To test validity of a theory
  - To propose a new direction of research

To understand creative cognition:
- To generate new hypotheses
  - Fieldwork
- To test hypotheses, construct a new theory or model
  - Psychological experiment

Our framework for studying creativity

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Our lab’s research in the past 10 years

- Research on artistic creativity
  - A coordinated set of field studies (Creativity and Inspiration Processes of Artists, CIPA) that follow the creative processes of 30 artists and 50 dancers. Some over the course of years. (Interviews, field observations, and field experiments)
    - e.g., Interviews with 30 artists include 13 male & 4 female elder artists, 8 male & 5 female young artists. 8 - 12 hours per person.
  - Psychological experiments with undergraduates and dancers.
  - Design-based research on artists’, dancers’, and actors’ workshops and undergraduate courses. Design-based research on exhibition development and visitor studies at two museums.
Today, as an example of our studies, I will talk about:

- Experimental studies on artistic inspiration
- Interview study with contemporary artists
- A case analysis of an artist’s process of creation
Inspiration has a critical role in artistic activities.

- Artists are often inspired by stimuli in their environment to create a new artistic expression.
Inspiration is the phenomenon in which people become motivated, experience new emotions, entertain new images and ideas for a new activity when they encounter someone or something outside of them.
How do examples inspire innovation?
The effect of imitating artwork on beginners’ creative drawing processes

Takeshi Okada

Collaborator: Kentaro Ishibashi


Okada, T. & Ishibashi, K. (under review).
Goal: To investigate the role of inspiration in the artistic creative process. We pay special attention to imitation (copying) as a way to be inspired.
It has been suggested that viewing or imitating an example has a negative effect on creativity (e.g., Design fixation by Jansson & Smith, 1991; Lowenfeld, 1957).

However, many famous artists created their artwork through imitation.
So, active imitation of other’s artwork could stimulate artistic creation.

But, no empirical study has been done on this issue.
We assume that imitation of others’ artwork affects people’s artistic creation processes as follows:

- When people imitate other’s artwork, they try to interpret it using their own framework.

- When they imitate artwork that does not match their framework, their framework is challenged. Therefore, the power of the framework would be weakened (constraint relaxation).

- They try to understand the artist’s intention by comparing it with their own. Such a process would force them to reconsider their own framework and contribute to the construction of a new framework (new perspective).
Art-lay people’s beliefs about painting

- Painting is to depict what they see.
  - They evaluate realistic paintings as good pictures.
    - (Cupchik & Gebotys, 1988; O’Hare, 1976)
  - They often draw realistic sketches.
    - Even if beginning students are asked to draw their own original drawings, they drew only in the realistic style. (Ishibashi, 2003)

→ This tendency constrains their ways of drawing.

- Therefore, we assumed that people have a “realistic constraint” as the default value.
Outline of this study

- **Exp. 1** To investigate the effect of imitation of artwork on artistic creation.
  - Is artwork produced after imitation more creative?
  - If so, is it caused by the process that we assumed?

- **Exp. 2 & 3** To investigate the factors of interaction that affects artistic creation.
  - What kind of artwork has the creative effect when imitated?
  - What kind of interactions including imitation and others have a creative effect?
Exp. 1
Does imitation affect artistic creation? 
: analysis of product
Outline of Exp. 1  (Okada & Ishibashi, under review)

- Participants
  - 30 undergraduates (non art majors)

- Task
  - We asked them to draw their original drawings using objects such as a pine cone and a pepper.

- We asked some of the participants to copy an unfamiliar abstract drawing.
Experimental design of Exp.1

- **Condition (between) x period (within)**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Pre (1st day)</th>
<th>Intervention (2nd day)</th>
<th>Post (3rd day)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Copy</strong></td>
<td>original drawing</td>
<td>2 Copies</td>
<td>original drawing</td>
</tr>
<tr>
<td><strong>control</strong></td>
<td>original drawing</td>
<td>2 original drawings</td>
<td>original drawing</td>
</tr>
<tr>
<td><strong>production</strong></td>
<td>original drawing</td>
<td>2 Copies</td>
<td>model’s style drawing</td>
</tr>
</tbody>
</table>
Result of performance

- **Experts’ rating**
  - Two artists independently evaluated drawings.
  
  \[ \downarrow \]
  - Only copy group improved creativity scores.

- **Similarity rating between model (abstract drawing) and students’ post drawings** (7 point scale)
  - Copy group  \( M = 3.3 \)
  - Reproduction group  \( M = 5.9 \)

\[ \Rightarrow \] Through copying, they learned to draw creative pictures different from the model drawing.
II. How does imitation improve creativity?

~ Process analyses~
Realistic constraint
(questionnaire)
(e.g. : I intended to depict
the exact shape.)
↓
Such intention decreased.

Realistic drawings
a) realistic sketches
b) representational pictures
↓
Such drawings decreased.

⇒Realistic tendency decreased after copying.
new perspective  (analysis of post interview)

Before copy

I would like to draw as realistically as I see.

After copy

Focused on subjective impression of the object

This pepper looks very lively.

Change of perspective after copying

→ A new perspective focusing on the impression of the object is formed. However, the content of the impression itself varies depending on each individual.

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Copying facilitates the formation of a new perspective.

- Protocol during copying \((n=10)\)

**Technique level of awareness.** \(n=10\)

e.g., “The thin shade lines are drawn in equal distance.” “This is very dark.”

**Perspective level of awareness.** \(n=10\)

- Formation of a new perspective
  - Inferring the artist’s perspective. “I think he focused on the spiky parts.”
  - Subjective interpretation. “I feel the shell is abandoned and left alone.”

- Interpretation from realistic perspective “This is not a leaf.”

⇒ Through copying, a new perspective was formed.
Results so far

- Exp. 1
  - Imitation can facilitate artistic creativity.
  - Constraint relaxation and perspective formation are involved.

⇒ Deep encounters with something different from their own framework seems to make students aware of the differences between their own perspective and others’, and triggers a search for new expression.
III. Exp 2 & 3
Factors underlying the effect of imitation
Exp. 2 Procedure

- Familiarity of model \( \times \) period (Pre, Post)

<table>
<thead>
<tr>
<th></th>
<th>Pre-test (day1)</th>
<th>Intervention (day2)</th>
<th>Post-test (day3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>abstract</td>
<td>Draw one’s original style of drawings with natural materials as a motif</td>
<td>copy</td>
<td>Draw one’s original style of drawings with natural materials as a motif</td>
</tr>
<tr>
<td>Semi-realistic control</td>
<td><img src="image1" alt="Pepper and Pinecone" /></td>
<td><img src="image2" alt="Copy" /></td>
<td><img src="image3" alt="Copy" /></td>
</tr>
<tr>
<td>control</td>
<td><img src="image4" alt="Pepper and Pinecone" /></td>
<td><img src="image5" alt="Copy" /></td>
<td><img src="image6" alt="Own drawing" /></td>
</tr>
</tbody>
</table>

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Exp. 2  Familiarity of model

- Creativity of drawings
  - Low familiarity group increased creativity.
  - High familiarity group did not increase creativity.
    - (contrast analysis)

⇒ Copying unfamiliar artwork improved creativity.
Exp. 3 procedure

- Way to interact with model x period

<table>
<thead>
<tr>
<th>Pre-test (day1)</th>
<th>Intervention (day2)</th>
<th>Post-test (day3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>copy</td>
<td>copy</td>
<td></td>
</tr>
<tr>
<td>view</td>
<td>view</td>
<td></td>
</tr>
<tr>
<td>suggest</td>
<td>Own drawing + suggestion</td>
<td>Own drawing</td>
</tr>
<tr>
<td>control</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Draw one’s original style of drawings with natural materials as a motif.
Exp. 3 Effect of the way to interact

- Creativity of drawings
  - Viewing model long enough had the same effect as copying.
  - Verbal suggestion had no effect.
    - (contrast analysis)

⇒ Deep interaction with other’s artwork improved creativity.

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Deep encounters with unfamiliar artwork through imitation encourages students to weaken old frameworks and generate a new perspective. This process enables them to search for new configurations and leads to new expressions.
How is an expert artist inspired by other’s work?
Study 2
Artistic creation across a long time span

Takeshi Okada
Collaborator: Sawako Yokochi


Goals

1. To investigate the differences in creative process and creative vision between young and expert artists.

2. To study the process of creative expertise across a longer time span.
Study 1-1

- Participants: Four contemporary artists with different expertise level
  - Artists who showed their work at Nagoya city art festival exhibition “try to create a human being”
    - 20’s female (7 years of experience)
    - 30’s male (13 years)
    - 40’s male (20 years)
    - 50’s male (36 years)

- Semi-structured interviews (Portfolio interview): Twice per person. In total about seven hours.

- Period: July, 2004 - March, 2005

Study 1-2

- Participants: Nine contemporary artists (male, mean age 44.2 yrs old)
  - More than ten years of being artists (average 20.4 years)
  - Exhibited not only in Japan but also in other countries

- Semi-structured interviews (Portfolio interview): Once or twice per person. In total about eight hours.

- Period: July, 2004 - May, 2005

<Portfolio interview>

We asked each artist to show a portfolio of his/her past works and talk about the time, techniques, materials, and concepts of each artwork.
What happens in the process of creative expertise?

- They created artwork in several series. We divided their process into three stages based on their artwork series.
  - 1. Before the first change
  - 2. After the first change
  - 3. After the second change

- We analyzed the process of creation and their thoughts in each stage.
### Study 1-1 Result

<table>
<thead>
<tr>
<th>Artwork series</th>
<th>Before 1st change</th>
<th>After 1st change</th>
<th>After 2nd change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>participant</td>
<td>20'</td>
<td>30'</td>
</tr>
<tr>
<td>external</td>
<td>Art making using existing values</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Art making with comparing with others</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>internal</td>
<td>Reconsideration of self</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Art making with suitable techniques for self</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Vision based</td>
<td>Art making based on awareness of an issue</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Art making based on creative vision</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Art making with considering relationship to others</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Art making without being captured by self consciousness</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Art making with vague interests</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>Art making with conviction</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>awareness of impasses</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td></td>
<td>explanation</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

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When I was making artwork of representationalism, I followed the way that I was taught and tried to be original. (male, 40’s)

When I was a student, I was trying to make an original work by trying to be different from others. (male, 30’s)

My work reflected my fragmented interests. (female, 20’s)

My work looked similar to someone’s. (male, 50’s)
After 1\textsuperscript{st} change (Late 20's)

- I started to reflect upon myself. I tried to discover my style, instead of using something taught. (male, 40's)

- Though I used iron material as a student, I felt much more natural when I made a work by knitting. (female, 20's)

- I felt that I cannot commit myself to social issues. So, I started to focus on the origin of myself and my body. (male, 50's)

- I felt that my sculpture era was over. I was not able to create something very interesting. (male, 50's)
After 2\textsuperscript{nd} change (late 30's)

<table>
<thead>
<tr>
<th>Artwork series</th>
<th>Before</th>
<th>After 2\textsuperscript{nd} change</th>
</tr>
</thead>
<tbody>
<tr>
<td>participant</td>
<td>20'30'</td>
<td>30'40'50'</td>
</tr>
</tbody>
</table>

- I feel that everything comes from one root, my base, etc. (male, 40's)
- I realized that thinking about myself is related to thinking about others and society. (male, 30's)
- I thought about how I can abandon myself. Without doing so, real creation would not start. (male, 40's)
- I am confident with my current work. (male, 50's)

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### Study 1-2 Result

<table>
<thead>
<tr>
<th>Category</th>
<th>First phase</th>
<th>Second phase</th>
<th>Third phase</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>external</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art making using existing values</td>
<td>100</td>
<td>29</td>
<td>0</td>
</tr>
<tr>
<td>Art making with comparing with others</td>
<td>43</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>internal</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reconsideration of self</td>
<td>14</td>
<td>86</td>
<td>0</td>
</tr>
<tr>
<td>Art making with suitable techniques for self</td>
<td>14</td>
<td>71</td>
<td>29</td>
</tr>
<tr>
<td>Art making based on awareness of an issue</td>
<td>29</td>
<td>71</td>
<td>86</td>
</tr>
<tr>
<td><strong>Vision based</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art making based on creative vision</td>
<td>0</td>
<td>14</td>
<td>100</td>
</tr>
<tr>
<td>Art making with considering relationship to others</td>
<td>0</td>
<td>14</td>
<td>100</td>
</tr>
<tr>
<td>Art making without being captured by self consciousness</td>
<td>0</td>
<td>0</td>
<td>53</td>
</tr>
<tr>
<td><strong>confidence</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art making with vague interests</td>
<td>100</td>
<td>57</td>
<td>0</td>
</tr>
<tr>
<td>Art making with conviction</td>
<td>0</td>
<td>14</td>
<td>100</td>
</tr>
<tr>
<td><strong>awareness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Awareness of impasses</td>
<td>86</td>
<td>86</td>
<td>0</td>
</tr>
<tr>
<td>Explanation</td>
<td>14</td>
<td>29</td>
<td>57</td>
</tr>
</tbody>
</table>

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Creative vision

- Creative vision (a somewhat abstract concept) underlies an artist’s creative activities.

- It works as a framework to guide an artist’s creation for a fairly long time.

- It becomes clarified in the process of artistic expertise.

- Even after being clarified, it changes in the process of artistic activities.
Roles of creative vision

- Guides an artist to generate his/her original concepts.
- Motivates him/her to continue artistic creation.
Study 3
How is an expert artist inspired by other’s work?

Takeshi Okada

Collaborators: Kikuko Takagi, Akihoro Kawase, Sawako Yokochi

Komaba Museum (University of Tokyo)
Special exhibition “behind the seen” 2008
When a contemporary artist, Takeshi Shinohara, told me that wants to see Marcel Duchamp’s ‘Large glass’ in Komaba Museum, we asked him to create artwork in collaboration with the Large glass. (Komaba Museum has one of the official replicas of the Large glass.)
Participant:

Contemporary artist,

Mr. Takeshi Shinohara

(in his fifties when participating in this field study)

- He studied art in Japan and in the USA, and has actively exhibited his artworks domestically and internationally.
- He has more than 30 years of experiences as a professional artist. He has created various kinds of artworks, including two-dimensional, three-dimensional, and video works.
Using idea sketches and photographs, he searched various ideas about his new artwork connecting his creative vision and features of the Large glass. The number of drawings and photographs reached more than 100 in a few weeks.
He generated the art concept, ‘white noise’ and created various types of artworks.

© 2008, Takeshi Shinohara
Shinohara’s process of art concept formation

<table>
<thead>
<tr>
<th>Artworks</th>
<th>Drawing phase</th>
<th>Photo phase</th>
<th>Hands-On phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encounter with the Large glass, 2007/12/7</td>
<td>-</td>
<td>-</td>
<td>Heavy use of photographs, 2008/1/18</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>Discovery of White Noise, 2008/2/4or19</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Photos</th>
<th>Drawing phase</th>
<th>Photo phase</th>
<th>Hands-On phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drawings</th>
<th>Drawing phase</th>
<th>Photo phase</th>
<th>Hands-On phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</table>

<table>
<thead>
<tr>
<th>Interviews</th>
<th>Drawing phase</th>
<th>Photo phase</th>
<th>Hands-On phase</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>
We conducted three-hour interviews with the artist every three weeks for about nine months.

We conducted quantitative analyses on the interview data.
Two morphological structures are depicted, centered on "image" and "Duchamp", respectively. "The Large Glass" connects the two structures.
Network of co-occurrence in each phase (excerpts from top 30 terms)

The morphological structure seems to be embedded in one structure centered on "image", "relation", and "meaning".

B Photography Phase
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"Duchamp" reappears in a structure centered on "image", and it is characteristic that "White Noise" appears co-occurring with "meaning", "image", and "representation".
A contemporary artist, Takeshi Shinohara, integrated his own creative vision with the inspiration from the Large glass by Duchamp and generated the art concept ‘White noise’.

Using this art concept, he created artworks that are different from Duchamp’s Large glass.

If he is in the stage of ‘Constrained to external criteria’, he might have created new artworks changing just parts of the Duchamp’s Large glass.
Conclusion of today’s talk

1) One’s cognitive constraints become relaxed through encountering others’ artworks. (constraint relaxation)

2) S/he forms a new perspective for own art making. (new perspective)

3) Accumulation of such experiences will lead to developing one’s own creative vision.

4) Through interaction between one’s own creative vision and others’ artworks, a new art concept is formed and new artworks are created.