The Process of Designers to Motivate Themselves for Their Creative Performance

Isono, Makoto*[a]; Shimada, Yoshimichi[b]; Takahashi, Kayo[c]

[a] Tottori University of Environmental Studies, Tottori, Japan

[b] Osaka Gakuin University, Osaka, Japan

[c] Kagoshima University, Kagoshima, Japan

* m-isono@kankyo-u.ac.jp

This study aimed to understand how designers motivate themselves to exert their creativity in development based on their own values and to examine the factors that make this possible.

The following findings were derived from the interviews with the 32 designers. In development that requires creativity, designers want to be as autonomous as possible and actively try to be involved in development based on their own values and those of the organization with which they are fully satisfied. To do so, they adjust their values by selecting part of their own and the organization's values.

It can be said from the findings that designers may be able to exert their creativity more in development by (A) actively approaching the values of the organization while adhering to one's own values, which are social-oriented, or (B) completely avoiding the values of the organization while adhering to one's own values.

Keywords: Creativity; Extrinsic Motivation; Autonomy; Value

1   Creativity and Motivation

Continuous innovation is essential for a firm's sustainable growth (Drucker, 2008). One of the important antecedents of innovation is the creativity of designers in developing ideas (Rogers 1983; Im & Workman Jr. 2004). Motivation plays a vital role in creativity (Collins & Amabile, 1999). In general, motivation can be broadly divided into intrinsic and extrinsic motivation (Collins & Amabile, 1999). Intrinsic motivation is the motivation to engage in an activity for a purpose derived from the activity itself, while extrinsic motivation is the motivation to engage in an activity for a purpose other than the activity (Collins & Amabile, 1999). Behavior driven by intrinsic motivation is more sustained and leads to higher performance, while behavior driven by extrinsic motivation is less sustained and leads to lower performance (Deci & Ryan, 1980). However, it has been shown that there are also types of extrinsic motivation that are closer to intrinsic motivation. The type closest to intrinsic motivation is extrinsic motivation with integrative regulation, which is motivated by one's own values. The next closest is extrinsic motivation with identification regulation (i.e., for self-esteem), followed by extrinsic

motivation with introjected regulation. The furthest from intrinsic motivation is extrinsic motivation with external regulation, which is motivated to obtain rewards or avoid punishment (Deci & Ryan, 1980).

According to Deci & Ryan (1980), the degree to which a person is more closely intrinsically motivated in dealing with objects is due to the degree to which the person feels autonomous, competent, and connected to others while sense of autonomy is the most important of the three.

Many studies, including Crutchfield (1962), have shown that intrinsic motivation is effective for creativity as well. However, because idea development is part of corporate activities, designers are inevitably motivated to develop ideas extrinsically, for example, for rewards, to fulfill their role as organizational members, or for customers. Therefore, research interest has shifted to understanding more effective extrinsic motivation. Studies such as Amabile (1993) and Malek et al. (2020) have shed light on how organizations and systems can effectively motivate designers extrinsically or encourage them to be intrinsically motivated. In that way, previous research has accumulated findings on how to motivate designers extrinsically to demonstrate their creativity. With this, we would like to point out one research problem that is yet to be addressed.

It can be said that designers who have been discussed in previous research are assumed to be essentially passive in getting motivated. However, this assumption may be challenged for the following reasons. According to Schein (1978), designers should engage in development activities based on a self-image that includes their values. Furthermore, according to Kasof et al. (2007) and Kreitler and Casakin (2009), people are motivated to engage in creative activities extrinsically with integrative regulation based on their own values. Therefore, designers can also be motivated extrinsically with integrative regulation based on their own values and engage in development activities trying to demonstrate their creativity. However, in parallel, designers may be motivated extrinsically with external, introjected, or identification regulation, as the values held by the organization (project team, superior, client, etc.) involved in development are often different from their own values. Therefore, it can be said that designers are, on the one hand, extrinsically motivated with integrative regulation based on their own values, while on the other hand, they are extrinsically motivated with identified, introjected, or external regulation.

According to Gillet et al. (2013), a state of being motivated without a sense of autonomy, such as being extrinsically motivated, is more unpleasant than a state of being motivated with a greater sense of autonomy, such as being extrinsically motivated with integrative regulation. Therefore, we would assume that even if designers are in a state of being extrinsically motivated in part with introjected or external regulation, they may return to their own values and actively try to put themselves in a state where they are more extrinsically motivated with integrative regulation to exert their creativity and seek pleasure.

This study aimed to understand whether and how designers try to change from a state of being extrinsically motivated with external and introjected regulation to a state of being extrinsically motivated with integrative regulation based on their own value to exert their creativity in idea development. According to Deci et al. (1994), the answer is that it is when one feels a sense of autonomy. Yet the question arises as to how designers actively try to obtain that sense of autonomy. Accordingly, the following research questions were formulated. When designers are involved in the development that requires creativity:

RQ1: How are they motivated? Do they actively try to motivate themselves extrinsically based on their own values, that is, with integrative regulation? If so, how do they do this? What are the factors that promote and hinder this?

RQ2: How can designers actively motivate themselves to lead to greater creativity?

Figure 1 summarizes the relationship among types of motivation, degree of sense of autonomy, and degree of effectiveness on creativity based on previous research.

Motivation	Extrinsic				Intrinsic
Regulation styles	External	Introjected	Identified	Integrated	
Sense of Autonomy	Low	Somewhat low	Somewhat high	High	High
Creativity	Less effective	Somewhat less effective	Somewhat more effective	Effective	Effective

Figure 1. Relationship among types of motivation, sense of autonomy and creativity, based on Ryan & Deci's (2000) Figure 1 with some modifications by the author

2 Method

The survey method employed was a qualitative interview with designers who worked on an idea development project that required creativity. The interviews were semi-structured and lasted approximately 1–2 hours. The main items asked were their own values in idea development, the values of the organizations they are involved in (their affiliated organizations, clients, development teams, etc.), how they prioritize their own values or the organization's values in development, and the quality of the development results.

The interviewed subjects included designers (in-house and freelance), marketers, business managers, writers, and researchers who have a track record of realizing some kind of creative, that is, novel and meaningful products or services in their respective fields as designers involved in product and service development (Table 1). The interviews were conducted with 32 participants from July 2022 to September 2024. Some of them had multiple different work experiences. In that case each of these experiences were heard and shown such as 4a, 4b in the Table 1.

Table 1. List of subjects interviewed

	Expertise	Position	Experience	One's Value (Upper) (Middle) (Lower)	One's Upper Value Type	Org.'s Value (Upper) (Middle) (Lower)	Reformed Value (Upper) (Middle) (Lower)	Creativity
1	Dsgn	Mgr	<30	Communication (Ad) Novelty (Ad) Expres. way (Cm)	Cs	- Project goal (Ap) (Member's direct.) (Ap)	Communication Novelty Project goal (Member's thought)	H
2	Dsgn	-	5	Cust. value (Ap)	Cs	- (Member's direct.) (Ap)	Customer value (Given direct.)	M
3	Dsgn	-	10	Solution (Ad) Cust. value (Ad)	Cs	- (Member's direct) (Ap)	Solution Cust. value (Member's direct.)	M
4a	Mktg	-	4	Self-express. (Ad) Competition (Ad)	Cr	- (Boss's thought) (Ap) (Member's thought) (Av)	Self-express. Competition (Boss's thought)	M
4b	Mktg	-	7	Self-express. (Ad) Competition (Ad)	Cr	- (Manager's thought) (Ap)	Self-express. Competition (Manager's thought)	M
5a	Dsgn	Mgr	30	Sustainability (Ad)	S	(Org. vision) (Av)	Sustainability	H
5b	Dsgn	Mgr	30	Sustainability (Cm)	S	- Aging society (Ap)	— Aging society	M
6	Dsgn	-	10	Solution (Ad) Exploration (Ad) Realizaiton (Ad)	Cs	- Sales (Ap)	Solution Exploratiopn Sales Realization	M

	Expertise	Position	Experience	One's Value	One's Upper Value Type	Org.'s Value	Reformed Value	Creativity
8a	Fin	Fr	30	Education (Ad) Reader feedback (Ad)	S	Business plan (Ap) Specification (Ap)	Education Reader feedback Business plan Specification	HH
8b	Fin	Rsr	30	Education (Ad) Stu. feedback (Ad)	S	- Rule (Av) (Neighbor's thought) (Ap)	Education Stu. feedback (Neighbor's thought)	M
9a	Mktg	Fr	30	Cust. needs (Ad) Org. transform. (Ad) Fin. reward (Ad)	Cs	(Top's thought) (Ap) (Member's thought) (Av)	Cust. needs Org. transform (Top's thought) Fin. reward	M

Table 1. List of subjects interviewed (Cont'd)

No.	Field	Role	Yr	Attr. (Ad/Cm)	Cat.	(Ap/Av)	Summary	Lvl
4a	Mktg	-	4	Self-express. (Ad) Competition (Ad)	Cr	- (Boss's thought) (Ap) (Member's thought) (Av)	Self-express. Competition (Boss's thought)	M
4b	Mktg	-	7	Self-express. (Ad) Competition (Ad)	Cr	- (Manager's thought) (Ap)	Self-express. Competition (Manager's thought)	M
5a	Dsgn	Mgr	30	Sustainability (Ad)	S	(Org. vision) (Av)	Sustainability	H
5b	Dsgn	Mgr	30	Sustainability (Cm)	S	= Aging society (Ap)	= Aging society	M
6	Dsgn	-	10	Solution (Ad) Exploration (Ad) Realizaiton (Ad)	Cs	Sales (Ap)	Solution Exploratiopn Sales Realization	M
7	Dsgn	-	15	Communicaton (Ad) Fun (Ad) Fill order (Ad)	Cs	Sales (Ap) = (Member's thought) (Ap)	Communiation Fun Sales (Member's thought)	M
8a	Fin	Fr	30	Education (Ad) Reader feedback (Ad)	S	Business plan (Ap) Specification (Ap)	Education Reader feedback Business plan Specification	HH
8b	Fin	Rsr	30	Education (Ad) Stu. feedback (Ad)	S	= Rule (Av) (Neighbor's thought) (Ap)	Education Stu. feedback (Neighbor's thought)	M
9a	Mktg	Fr	30	Cust. needs (Ad) Org. transform. (Ad) Fin. reward (Ad)	Cs	(Top's thought) (Ap) (Member's thought) (Av)	Cust. needs Org. transform (Top's thought) Fin. reward	M
9b	Mktg	Mgr	25	Cust. value (Ad) Org. transform. (Ad) Fin. reward (Ad)	Cs	Tech.-oriented (Av) (Member's thought) (Av)	Cust. value Org. transform Fin. reward	M
9c	Mktg	Mgr	20	Cust. value (Ad) Fin. reward (Ad)	Cs	Cust. value (Ap) Leadership (Ap)	Cust. value Leadership Fin. reward	M
10	Eng	Mgr	30	Self-growth (Ad) Mastery (Ad)	Cr	Expansion (Av) Management (Ap)	Self-growth Mastery Management	M
11	Mgmt	Mgr	30	Democracy (Ad) Reader first (Ad) Interview (Ad)	S	Democracy (Ap) (Member's thought) (Ap)	Democracy Reader first (Member's thought) Interview	HH
12	Dsgn	-	15	Friendship (Ad) Cust. value (Ad) Mastery (Ad) Detail (Ad, Cm)	Cs	Industry growth (Ap) Product-out (Av) (Member's thought) (Ap)	Friendship Cust. value Mastery Industry growth (Member's thought)	M
13a	Lw	Mgr	30	Education (Ad) Stu. growth (Ad)	S	(Owner's thought) (Ap)	Education (Owner's thought) Stu. growth	H
13b	Lw	Rsr	20	Education (Ad) Stu. growth (Ad)	S	(Owner's thought) (Av)	Education Stu. growth	M
14a	Mgmt	-	15	Education (Cm) Stu. growth (Cm)	S	(Owner's thought) (Ap)	(Owner's thought)	M
14b	Mgmt	Rsr	10	Education (Ad) Stu. growth (Ad)	S	(Owner's thought) (Av)	Education Stu. growth	M
15	Dsgn	Mgr	30	Solution (Ad) Realization (Ad)	Cs	Big & small design (Ap) (Client's thought) (Ap) (Member's thought) (Av)	Solution Big & small design Realization	H
16	Mgmt	Mgr	20	Self-beauty (Ad) Cust. value (Ad) Fun (Ad)	P	(Owner's thought) (Ap) Fin. perform. (Ap)	Self-beauty Cust. value Fun (Owner's thought) Fin. perform.	HH
17	Mgmt	Mgr	15	Nature (Ad) Pay for Perform. (Cm, Ad)	P	= Pay for time (Ap)	Nature Pay for perform. Pay for time	HH
18a	Dsgn	-	30	Earn to play (Ad) Contribution (Ad) Comfort zone (Ad)	P	Customer-oriented (Ap) Challenge (Av)	Earn to play Contribution Customer-oriented Comfort zone	M
18b	Dsgn	-	25	Earn to play (Ad) Contribution (Ad) Comfort zone (Ad)	P	= Inward culture (Av) Expansion (Av)	Earn to play Contribution Comfort zone	M
18c	Dsgn	-	20	Earn to play (Ad) Contribution (Ad) Comfort zone (Ad)	P	Customer-oriented (Ap) Marketing (Ap)	Earn to play Contribution Customer-oriented Marketing Comfort zone	M
19	Dsgn	Mgr	20	Realization (Ad) Detail (Ad, Cm)	Cs	(Client's thought) (Ap) Requirement (Ap)	Realization (Client's thought) Requirement Detail	H
20	Dsgn	-	10	Realization (Ad) Detail (Ad, Cm)	Cs	(Client's thought) (Ap) Requirement (Ap)	Realization (Client's thought) Requirement Detail	M
21a	Dsgn	-	10	Solution (Ad) Growth (Ad) Mastery (Ad)	Cs	- (Director's thought) (Ap) (Member's thought) (Ap)	Solution Growth Mastery (Director's thought) (Member's thought)	M
21b	Dsgn	-	5	Solution (Ad) Growth (Ad) Mastery (Ad)	Cs	(Director's thought) (Av)	Solution Growth Mastery	M
22	Dsgn	Rsr	5	Novelty (Ad) Innovation (Ad)	S	- Fixed rule (Av) Procedure (Av, Ap) Performance (Ap)	Novelty Innovation Procedure Performance	
23a	Mgmt	Mgr	15	Rescue (Ad) Corp. reproduct. (Ad)	S	(Client's thought) (Ap) (Member's thought) (Av)	Rescue Corp. reproduct (Client's thought)	HH
23b	Mgmt	Mgr	10	Rescue (Ad) Corp. reproduct. (Ad) Performance (Ad)	S	Corp. reproduct. (Ap) Performance (Ap) (Member's thought) (Av)	Rescue Corp. reproduct Performance	M
24	Dsgn	-	20	For everyone (Ad) Simplicity (Ad)	Cs	(Buyer's thought) (Ap) Cost (Ap)	For everyone Simplicity (Buyer's thought) Cost	M
25a	Lab	Rsr	20	Contribution (Ad) Originality (Ad) Mastery (Ad)	S	Social needs (Av) = Biomass College appeal (Ap) Education (Ap)	Contribution Originality Mastery College appeal Education	HH
25b	Lab	Rsr	10	Contribution (Ad) Originality (Ad) Mastery (Ad)	S	Social needs (Ap) = Biomass College appeal (Ap) Education (Ap)	Contribution Originality = Biomass College appeal Education	M
27	Mkg	-	10	Brand (Ad) Communication (Ad) Realization (Ad) Reward (Ad)	S	(Owner's thought) (Ap) Fin. performance (Ap) (Member's direction) (Ap)	Brand (Owner's thought) Communication Realization Fin. performacne (Member's direction)	M
28	Dsgn	-	10	Mastery (Ad) Contribution (Ad) Growth (Ad)	Cr	(Owner's thought) (Ap) Fin. performance (Ap) (Member's direction) (Ap)	Mastery Contribution Growth	M

No.	Expertise	Position			Value type			Creativity
24	Dsgn	-	20	Performance (Ad) For everyone (Ad) Simplicity (Ad)	Cs	(Member's thought) (Av) (Buyer's thought) (Ap) Cost (Ap)	Performance For everyone Simplicity (Buyer's thought) Cost	M
25a	Lab	Rsr	20	Contribution (Ad) Originality (Ad) Mastery (Ad)	S	Social needs (Av) = Biomass College appeal (Ap) Education (Ap)	Contribution Originality Mastery College appeal Education	HH

Table 1. List of subjects interviewed (Cont'd)

No.	Expertise	Position			Value type			Creativity
26	Mktg	-	10	Self-growth (Ad)	Cr	Project goal (Ap) (Member's direction) (Ap)	Self-growth Project goal (Member's direction)	M
27	Mkg	-	10	Brand (Ad) Communication (Ad) Realization (Ad) Reward (Ad)	S	(Owner's thought) (Ap) Fin. performance (Ap) (Member's direction) (Ap)	Brand (Owner's thought) Communication Realization Fin. performacne (Member's direction)	M
28	Dsgn	-	10	Mastery (Ad) Contribution (Ad) Growth (Ad) Work (Ad)	Cr	(Owner's thought) (Ap) Fin. performance (Ap) (Member's direction) (Ap)	Mastery Contribution Growth (Owner's thought) Fin. performance Work (Member's thought)	M
29	Mktg	Mgr	30	Contribution (Ad) Democracy (Ad) Cust. value (Ad, Cm))	S	Society (Ap) ROI (Av)	Contribution, Society Democracy Cust. value ROI	M
30	Mgmt	Mgr	30	Fun (Ad) Creative (Ad)	P	Sales/Profits (Av) Non-creative thought (Av)	Fun Creative	HH
31	Dsgn	Mgr	20	Fun (Ad) Business (Ad) Mastery (Ad)	Cs	(Member's thought) (Ap)	Fun Business (Member's thought) Mastery	M
32	Dsgn	-	20	Fill order (Ad) Grasp order (Ad) Expres. way (Ad, Cm)	Cs	(Client's thought)(Ap) (Order)(Ap)	Fill order - Order (Client's thought) Grasp order Exppres. way	M

Note:

Expertise: Dsgn: Design; Mktg: Marketing; Fin: Finance; Eng: Engineering; Mgmt: Management; Lw: Law; R&D: Research & Development; Position: Mngr: Manager; Fr: Freelancer; Rsr: Researcher; One's value type: Cs: Customer-oriented; S: Society-oriented; Cr: Career-oriented; P: Pleasure-oriented; F: Friendship-oriented; Value: Cust. value: Customer value; Self-express: Self-expression; Org. vision: Organization vision; Stu. feedback: Student's feedback; Cust. needs: Customer needs; Org. transform: Organization transformation; Fin. reward: Financial reward; Stu. growth: Student growth; Pay for perform: Pay for performance; Member's direct: Member's direction; Expres. way: Expression way; Corp. reproduct: Corporation reproduction; Fin. perform: Financial performance; Value Adjustment Strategy: Ad: Adherence strategy; Cm: Compromise strategy; Ap: Approach strategy; Av: Avoidance strategy; Creativity: HH: Higher; H: High; M: Medium
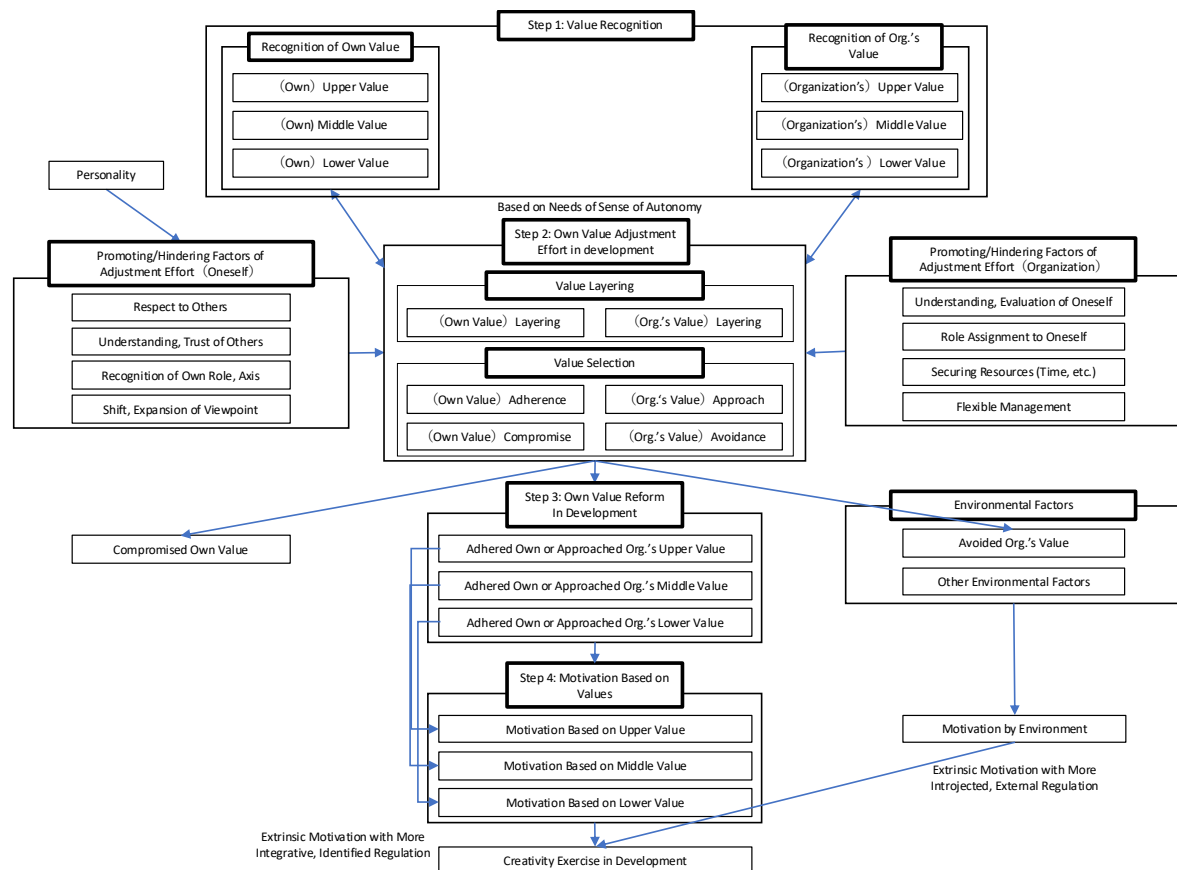
The results were analyzed according to Kinoshita's (2003) M-GTA (Modified Grounded Theory). The analysis was conducted as follows:

1 All interview content was coded.

2 Concepts related to the research questions (equivalent to "analysis themes" in M-GTA) were generated from the coded interview content. Each concept was defined with the specific examples.

3 Among the generated concepts, related concepts were categorized.

4 Furthermore, the relationships between categories and concepts within the resulting categories were examined, and related concepts were arranged according to their relationships while indicating those relationships. This arrangement, as well as the categories and concepts themselves, were repeatedly reviewed and revised until all interview cases could be well explained, in other words, until theoretical saturation was reached.

5 The resulting arrangement of categories and concepts was designated the "Designer's Creativity Motivation Model" (equivalent to the "result diagram" in M-GTA) as a model to explain the process by which designers are motivated to exert their creativity (Figure 2). The seven main categories, two subcategories, and 23 concepts that ultimately comprise this model were identified (Table 2).

Table 2. List of Concepts

Concept [Category]	Definition	Examples
[Value recognition] **[Recognition of own value]** **[Recognition of org's value]** **[Own value reform in development]**		
Upper value (incl. Own—, Org's—, Adhered own—, Approached org's—)	Upper, more conceptual, more ideal part of own or org's value	"Pursue my potential – who I am" (10) "Develop things to meet customer's desire" (9a) "Want to study more; Propose design for customer experience" (6)
Middle value (incl. Own—, Org's—, Adhered own— Approached org's—)	Part between upper and lower part of own or org's value	"To what extent my expertise works for the industry" (10) "What matters is to change how the organization works." (9a) "To solve the given problem." (6)
Lower value (incl. Own—, Org's—, Adhered own—, Approached org's—)	Lower, more concrete, more realistic part of own or org's value	"Management of my team, which is something I have to do" (10) "If it's about how to do (not about what to do), …" (9a) "We ought to deliver financial result" (6)
[Value adjustment effort] **[Value layering]**		
Value layering (incl. Own—, Org's—)	Layering the own or org's value into upper, middle, lower part	"Need to separate issues of what to do from issues of how to do" (9a) "Not interested in such detail" (23a)
[Value selection]		
(Own) Value adherence	Adhering, maintaining own value	"Commit to make it a reality" (15)
(Own) Value compromise	Compromising, giving up own value	"I say as much as I can, but nothing happens in most cases." (1)
(Org's) Value approach	Approaching, integrating org's value into own value	"What the director says always make sense to me. I agree with him." (21a)
(Org's) Value avoidance	Avoiding, Getting away from org's value	"I'm told stupid things. I simply ignore that." (8b)
[Factors of value adjustment effort (Own)]		
Respect to others	Paying respect to org or others (president, boss, counterpart, report, etc.) in org	"Our trust to the president is so strong that…" (27)
Understanding, trust of others	Taking to, understanding, sharing with, trusting others (president, boss, counterpart, report, etc.) in org	"The boss step in and try to find answer with me." (6) "We support each other" (12)
Recognition of own role	Recognizing own role, what one ought to do	"I've got to do that as a manager." (10)
Shift, expansion of viewpoint	Shifting, expanding, switching own viewpoint	"I happen to find myself making mistakes while I'm talking." (11) "I can see take a step back and see." (10)
Personality	Own personality	"I am a person not having a strong self." (3)
[Factors of value adjustment effort (Org)]		
Understanding, evaluation of oneself	Org talking to, understanding, sharing with, trusting one	"I think our manager is good at listening to us." (11)
Role assignment of oneself	Org allocating right role and responsibility to one	"Essentially I am designing for my customer." (6)
Securing resources (time, etc.)	Org securing development resources for one	"The boss allows me to step ahead doing some experiment," (6) "I get funded additionally." (20)
Flexible management	Org managing one as one having freedom and discretion	"It's micromanagement culture." (8b) "Our manager makes sure that we work at our will." (11)
Compromised own value	Compromised own value	"I say "you may be right" although I think it's a wrong idea" (19) "I completely clear my mind." (1)
[Environmental factors]		
Avoided org's value	Avoided org's value	"I speak clearly to the boss that I do not want to be a team leader." (18a)
Other factors	Environmental factors other than org's value such as reward, quota, order)	"The bigger the scale of the project, the higher my motivation…" (19)

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Figure 2. Designer's Creativity Motivation Process Model

Step 1: Value Recognition

Recognition of Own Value
- （Own）Upper Value
- （Own）Middle Value
- （Own）Lower Value

Recognition of Org.'s Value
- （Organization's）Upper Value
- （Organization's）Middle Value
- （Organization's）Lower Value

Personality

Based on Needs of Sense of Autonomy

Promoting/Hindering Factors of Adjustment Effort（Oneself）
- Respect to Others
- Understanding, Trust of Others
- Recognition of Own Role, Axis
- Shift, Expansion of Viewpoint

Step 2: Own Value Adjustment Effort in development

Value Layering
- （Own Value）Layering
- （Org.'s Value）Layering

Value Selection
- （Own Value）Adherence
- （Org.'s Value）Approach
- （Own Value）Compromise
- （Org.'s Value）Avoidance

Promoting/Hindering Factors of Adjustment Effort（Organization）
- Understanding, Evaluation of Oneself
- Role Assignment to Oneself
- Securing Resources (Time, etc.)
- Flexible Management

Compromised Own Value

Step 3: Own Value Reform In Development
- Adhered Own or Approached Org.'s Upper Value
- Adhered Own or Approached Org.'s Middle Value
- Adhered Own or Approached Org.'s Lower Value

Environmental Factors
- Avoided Org.'s Value
- Other Environmental Factors

Step 4: Motivation Based on Values
- Motivation Based on Upper Value
- Motivation Based on Middle Value
- Motivation Based on Lower Value

Motivation by Environment

Extrinsic Motivation with More Introjected, External Regulation

Extrinsic Motivation with More Integrative, Identified Regulation

Creativity Exercise in Development

3 Results and Discussion

3.1 How are designers motivated? The process of integrative extrinsic self-motivation

RQ1: How are designers motivated? Are they actively trying to extrinsically motivate themselves based on their values (i.e., with integrative regulation)? If so, how? What are the factors that encourage and hinder this behavior?

It was observed that essentially every designer was trying to get involved in development based on their own values or the values of the organization (project team, superior, client, etc.) that they fully understood, sympathized with, and could consider almost equal to their own. This can be judged from the fact that designers attempted to adopt the value adjustment strategy described below. Figure 2 shows the designer's Creativity Motivation Process Model, which describes the process of designers getting motivated to exert creativity for their idea development, interpreted from the interview results.

3.1.1 Step 1: "Recognizing their own and the organization's values"

First, a designer recognizes their own values regarding development ("recognizing their own values"). On the other hand, there is an organization to which they belong or are confronted, and the designer recognizes the values of that organization ("recognizing the organization's values").

3.1.2 Step 2: "Efforts to adjust one's own values in development"

When engaging in a certain development, the designer wants to have a sense of autonomy based on their own values. However, there are values of the organization involved in development, which must

also be considered. Therefore, the designer makes efforts to adjust his own values with the values of the organization in mind, using the following strategies:

First, when engaging in development, the designer layers their own and the organization's values into higher and lower levels as necessary (value layering strategy).

Then, for each level, the designer adheres to their own values (value adherence strategy), avoids the organization's values (value avoidance strategy), compromises their own values (value compromise strategy), and/or approaches the organization's values (value approach strategy), combining and adjusting their own values and the organization's values in the best possible way for themselves.

3.1.3 "Factors that promote and hinder adjustment efforts"

Efforts to adjust one's own values are promoted and hindered largely by the following factors. The first is factors within oneself ("Factors that promote and hinder adjustment efforts (oneself)"), which include respect for the other party (organizational members), conversation, understanding, sharing, and trust with the other party (organizational members), recognition of one's own role and axis, and transformation, expansion, and switching of one's own perspective. This factor is also influenced by one's personality. The other is a factor within the organization ("Factors promoting/hindering adjustment efforts (organization)"), which includes conversation, understanding, sharing, and evaluation of oneself (by the organization). It includes the role and work assigned to oneself (by the organization), securing/restricting resources such as time for oneself (by the organization), and one's freedom/restrictive management (by the organization).

3.1.4 Step 3: "Reforming one's own values in development"

As a result of the above efforts, the designer's values are reformed. It consists of (part of) their own values that are adhered to and/or (part of) the values of the organization that are approached at each of multiple layers, such as the upper, middle, and lower layers.

In addition to the reformed values, there may be compromised values and avoided values of the organization (compromised designers' own values, avoided values of the organization).

3.1.5 Step 4: "Motivation based on values"

With these reformed values, designers are involved in development and are motivated to exert their creativity. The reconstructed values are a composite of one's own values that have been upheld and/or the values of the organization that have been approached. Each of the values of the multiple layers that make up this composite, such as the upper, middle, and lower layers, is thought to lead to a different type of motivation. For example, in the upper layer, there are the upheld values of one's own, which are motivated by extrinsic motivation with integrative regulation; in the middle layer, there are the values of the organization that have been approached, which are motivated by extrinsic motivation with identified or introjected regulation; and in the lower layer, there are other values of one's own that are upheld, which are also motivated by extrinsic motivation with integrative regulation.

In addition, the compromised values of one's own that are outside the reconstructed values of one's own, and the avoided values of the organization, can also be involved in the motivation to exercise creativity. Both of these become extrinsic motivations that involve external or introjected regulation, which gives a feeling of less autonomy.

The exercise of creativity is motivated by each of these values in multiple layers and even by things outside one's own values. In other words, while on the one hand designers may be primarily motivated extrinsically with integrative regulation based on their own values, they may also be motivated

extrinsically with introjected, identified, and/or external regulation based on the values of the organization.

3.2 Characteristics of the efforts made by designers who demonstrate remarkable creativity to actively motivate themselves in an integrative and extrinsic manner

RQ2: How can designers actively motivate themselves in an integrative and extrinsic manner to demonstrate greater creativity?

The values of the designers interviewed can be classified into four types: career-oriented, pleasure-oriented, customer-oriented, and society-oriented. Furthermore, career- and pleasure-orientation are both viewed as self-oriented values, while customer- and society-orientation are both viewed as others-oriented values. These types of values are defined in the way shown in the table 3 based on the interview result.

Table 3. Types of values and their examples

Types of value		Definition	Examples
self-oriented value	career-oriented	More conscious of their own career development	"Want to demonstrate my abilities" (4a) "Pursue my potential" (10)
	pleasure-oriented	More conscious of pleasure in their lives	"Work to enjoy my life" (18a) "Looking for something fun" (30)
others-oriented value	customer-oriented	More conscious of their customers	"Deliver message to customers" (1) "Solve the problems customers have" (6)
	society-oriented	More conscious of the society	"Global environment conservation" (5a) "Right financial education" (8a)

In this interview, eight designers, 5a, 8a, 11, 16, 17, 23a, 25a and 30 were identified as designers who demonstrated particularly remarkable creativity based on their performance records.

Of these, 8a, 11, 16, 17 maintained their own values, which were social- or pleasure-oriented, while simultaneously actively approaching the values of the organization they were dealing with. When the values designers hold are customer- or career-oriented, they should find it easier to approach the values of the organization they are dealing with. This is because when the values designers hold are customer-oriented, the customer is likely to be the organization they are dealing with. When the values are career-oriented, designers want to approach the organization for career building. However, when the values designers hold are social- or pleasure-oriented, they should find it harder to align with them and will want to avoid them unless the values of the organization are similar to the values of the designers. Nevertheless, they approached them instead. The following are possible reasons for this finding. First, the emergence of creativity is the combination of different existing knowledge and idea fragments (Finke et al., 1992). The greater the difference, the higher the creativity (Wilkenfield & Ward, 2001). These four designers may be trying to combine knowledge associated with their own values with knowledge associated with the different values of the organization to demonstrate their creativity, assuming that knowledge associated with the values that are more difficult for ones to accept are more different to knowledge associated with the values they hold.

Alternatively, 5a, 16, 23a and 30 were almost entirely avoidant of the values of their organization and engaged in development by adhering to their values. There were no other cases where people adhered to their own values and almost entirely avoided the values of the organization they were

facing. If they could engage in development according to their own values, they would inevitably be more extrinsically motivated with integrative regulation, which would favor the exercise of creativity.

4   Findings and Implications

The findings of this study are summarized as follows. In development that requires creativity,

1. Designers want to be as autonomous as possible and actively try to be involved in development based on their own values and those of the organization that they are fully satisfied with. In order to do so, they (A) layer their own and the organization's values into higher and lower layers as necessary (value layering strategy), and (B) adjust the values that form the basis of development by adhering to their own values, compromising them, approaching the organization's values, and/or avoiding them (value selection strategy) for each layer.

2. As a result, while designers are primarily extrinsically motivated with integrative regulation based on their own values, they are often in parallel extrinsically motivated with identified, introjected or external regulation based on the organization's values.

3. Adhering to one's own values or avoiding the organization's values is possible when designers recognize the role they must play, or when the organization has free control over designers. Approaching the organization's values or compromising one's own values can be made possible by designers respecting, trusting, and understanding the other party, by changing their own perspective, or by the organization reserving resources such as time and budget for the designers.

4. It may be particularly effective for creativity to (A) actively approach the values of the organization while adhering to one's own values, which are social-oriented, or (B) completely avoid the values of the organization while adhering to one's own values.

As these findings are drawn qualitatively, quantitative research is required to verify their validity. Based on these findings, the following suggestions can be made to designers to exert their creativity in idea development: designers can motivate themselves to demonstrate their creativity by adjusting their values regarding development to match those of the organization. This adjustment involves stratifying their and organization's values and making choices of them. This can be achieved by designers recognizing their own roles and changing their perspectives, and by trusting and understanding the people in the organization. In particular, it may be more effective to approach an organization whose values are significantly different from one's own or, conversely, to completely avoid the values of the organization.

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