On the Acquisition of Death's Concept in Infancy (2) —Some Studies on the Correlation between the Biological and Social Understanding about Death and Images of Afterlife

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# Summary

I conducted a survey to study on the acquisition of death's concept in infancy as a member of this research by Hyogo Junior College team in Italy and Germany, Japan in each period from February 2012 to September 2013. In this article, I considered aspects of infants' understanding on death through an analysis of the correlation between the biological understanding about the death, understanding of infant about death and its social relationship and image of infant about the afterlife through analysis using Peason's correlation coefficient. As a result, the following findings were obtained: 1. There is a weak correlation between understanding death and understanding playing activities. 2. No correlation between understanding death and possibility of conversation, understanding about afterlife.

keywords : biological understanding about death, understanding about death and social relationship, images about afterlife

# Introduction

Although death is generally despite abominable in time, a great number of researches on death have been presented up to the present. This is same as research on development of understanding for the life and death in infancy.

The studies on the acquisition of a concept about death by Piaget and

Kastenbaum especially have great authority in field of psychology. According to Kastenbaum, four-year-old infants can understand death, but their understanding is still insufficient because of imperfection of their biological knowledge about death. <sup>1)</sup> In order to catch development phases on biological understanding about death, I would like to see next three points, that is, First, an understanding about

of infants through their the death biological phenomenon, namelv. development of their understanding of infants about the relations between the physiological function and death. the development of their Second. understanding about the relationship between the social nature of man seen in the linguistic communication and biological death. Ιt includes understanding about the human relations and biological death. Third, the infant has understanding of on irreversibility of death through contrastive understanding of life and death or have not. Or if it may depend on the image of the life after death.

The general tendency understanding of infants on these three points in this research not contradicting t.o the relationship between biological and social death understanding on and the understanding on concept of death in infants. However, questions and hints from different perspectives delivered by researcher and teachers became precondition of the answer. infants have —even hazy understanding understanding about death through observations, and experiences natural phenomena or when they have imperfect understanding understanding about biological death, they need ability to represent them through language. understanding on something in general must be represented through linguistic element. I must regretfully leave some of these to other occasions.

I hypothesize that their

understanding about death has the great difference between three years old and four years old. After four years old, the contents of this understanding become richer and richer and a speech expression become more and more skillful. They are able to consider diverse cases and factors of the causation and the relationship on death. Infants become as able to correspond various examples and reasons for phenomenon of death along with linguistic development. Therefore he/she becomes able to speak own ideas about a life after death (the world of after death).

It is certain in the picture book which I used in our research is more applicable for four years old and older. After four years old, an infant can report the detail explanation about death or his memory of a funeral he attended. 2) Although language is a for precondition understanding on of phenomenon death understanding is connected with number of vocabulary, I think that an infant renews his/her understanding with prelinguistic understanding about death each time by reconstructing learning language in the environment. As a case which Kastenbaum mentioned, it is say that the insufficiency of understanding about death of infant is relate to the insufficiency of knowledge about physiological phenomenon biological function of the human body and other living beings, namely, the insufficiency of understanding language about them. Understanding of the death be relate to experience and

insight on phenomenon of death, and acquisition of vocabulary about them.

Generally speaking, we do not many occasions to meet death of have someone. Consequently, I assume that there is no great difference between an adult and an infant, in the external information on death, except knowledge of three signs of death and criteria on determination of brain death. fact, the death itself has been riddle to everybody. For this reason, that the problem presume on insufficiency of understanding about in infancy is insufficiency of biological knowledge but that of social condition and relation, and of understanding through language.

I suppose the total of knowledge of social experience on death which constitutes the foundation biological understanding about the death, the difference and the degree for social experience and consciousness on life and death are grasp as the difference of understanding based on If there is no great difference in understanding the minimum and simple yardstick in life or death, I can say that the acquisition of death's concept in infancy depends on knowledge through social experience and language.

# 1. Outlines of investigation

# 1.1 Method of researches

Analysis and the consideration in this article are based on collective data of the number of all samples got by an attitude survey same as article (1) (Miura, 2018, Bibliography 2.). About an investigation summary and the method, I show only minimum contents in the item in the following.

[Time and place for enforcement of our research]

From February 2012 to September 2013. In Italy, Germany and Japan.

[The Object of research]
From three years old to the pre-school age (to a primary school).

[Italy] 68 persons [Germany] 70 persons [Japan] 104 persons

[A picture book for reading]
[The title of a book]
Dick Bruna, "Dear Grandma Bunny",
translated by Ted Smart.
[Original text]

Dick Bruna, *"Lieve Oma Pluis"*, Publication licensed by Mercis Publishing, 1996 Amsterdam.

[Translators of picture book for reading]

Italian text; translated by Rie Zushi German text;

translated(interpretation) by Nottelmann-Feil, Marc

Japanese text; by Kyoko Matsuoka Japanese edition published by Fukuinkan Shoten Publishers Inc., Tokyo: 2008.

[The time required for research] The time required of per person: About five or six minutes.

[Details]

The time for reading: three minutes.

The time for ask questions: Two or three minutes.

In a question and a talk with infant, I used expression such as "a rabbit or a rabbit's girl" in addition to Miffy inline with the understanding of the infant.

[Place for researches]

Kindergarten or nursery school

# 1.2 List of question items

classroom.

[Q1.] What happened to Miffy's grandmother?

(In two kindergartens of Germany; What did you feel when you heard this story?)

- [Q2.] Why did Miffy's grandmother die? [Q3.] Can Miffy's late grandmother breathe?
- [Q4.] Can Miffy play with her late grandmother?
- [Q5.] Do you think that sometime Miffy will be like her grandmother?
- [Q6.] What will become of Miffy's late grandmother? (What do you think will be Miffy's late grandmother from now on?)
  [Q7.] Can Miffy talk with her late grandmother?
- [Q8.] Does Miffy remember her late grandmother all the time?
- [Q9.] Do you think that everybody become like Miffy's late grandmother? [Q10.] What kind of feeling do you have when you heard the story?

Do you feel sad or pity?

- [Q11.] Do you want to rescue Miffy's grandmother?
- [Q12.] Would you be kind to Miffy? Do you want to be kind to Miffy?

# 2. A few analysis and consideration

Based on outlines of our investigation result, I try to make some analysis and consider the correlation in three angles (viewpoints) that I proposed in the beginning.

Three viewpoints are; 1. the understanding of infants the on between relation a physiological function (respiration) and death, 2. the understanding of infants on the relation between human beings, society and biological death, 3. the relation between their understanding on death and their afterlife images. On the correlations of these three points, I analyze questions mutually based on Pearson's product-moment correlation coefficient defining statistically significant correlation following.

# 2.1 The correlation between understanding of infants on a physiological function (respiration) (Q 3) and of the death (Q 1).

The correlation coefficient between "dead" (Q1-C1.) and "breathing is impossible" (Q3-C1.) is 0.317 (p<.01). Therefore, between the responses to the two questions is a positive correlation. (Table1.) I think that a correlation between "dead" (Q1-C1.) and "breathing is impossible" (Q3-C1.) is rejected because the significant probability is 0.000 and because it is smaller than significant level, 0.01.

Table1.
Statistics of the correlations between Q1. and Q3.

	Variable						
	<b>Q3</b> -C1 <b>Q3</b> -C2 <b>Q3</b> -C3	<b>Q3</b> -C4 <b>Q3</b> -C5					
Q1-C1. Correlation	. 317** 116 204**	207**					
Significant probability	.000 .097 .003	. 003					
Q1-C2. Correlation	.042024020	024					
Significant probability	.547 .727 .778	. 727					

<sup>\*</sup> p<.05 \*\* p<.01

Q1. : C1. She died, C2. She is as leep, C3. I do not remember,

C4. I do not understand, C5. Other reasons, C6. Non-response.

**Q3.**: C1. No (unable to), C2. Yes (able to), C3. I do not understand, C4. Other reasons, C5. Non-response.

But this number is statistically significant in relation with null hypothesis, in accordance with a correlation coefficient of both is not rejected. Therefore, there is a significant relation between both.

On the contrary, the correlation coefficient between "dead" (Q1-C1.) and "breathing is possible" (Q3-C2.) is -0.116, in these two responses there are negative correlation.

Moreover, a correlation coefficient between "dead" (Q1-C1.) and "no understand (breathing is possible or impossible)" (Q3-C3.) is -0.204, and a correlation coefficient between "dead" (Q1-C1.) and "no response (no answer)" (Q3-C5.) is -0.207, the response to each question has negative correlation.

These analyses show that there is a correlation between infants' understanding about meaning of death and their understanding on physiological function of respiration. I can also say that infants can

understand the relationship of death and a symptom of biological death. This result of analyses is more apparent in high average age of infants (ages of 4-5). But in their understanding on death from biological viewpoint, I can say that this result is different from views of Piaget and Kastenbaum. I think it is worth considering whether this result is brought by the change of the time and culture in acquisition of the concept on their death and life or by the difference on the method of analysis.

However, I cannot go into detail because of limited space on this problem. I need the more detailed analysis and consideration of the data from Italy and Germany, especially I have to concern more of infants' age.

# 2.2 The correlation between infants' understanding on death (Q.1) and their understanding on human beings in concerns with society(i) (play to construct of personal relations)(Q.4.)

The correlation coefficient between "dead" (Q1-C1.) and "playing is impossible " (Q4-C1.) is 0.209, between these response has positive correlation. (Table2.) The significant probability of this correlation is 0.003, this value is statistically significant, because we are unable to statistical get quantity significance test only less than 1% probability, even if establishes level of significant a 1% standard. Therefore, a correlation coefficient both is not rejected.

Table2.

<u>Statistics of the correlations between Q1. and Q4.</u>

	Variable							
	<b>Q4</b> -C1	<b>Q4</b> -C2	<b>Q4</b> -C3	<b>Q4</b> -C4	<b>Q4</b> -C5			
Q1-C1. Correlation	. 209**	116	142*		104			
Significant probability	. 003	. 096	. 041		. 138			
Q1-C2. Correlation	. 033	018	014		022			
Significant probability	. 635	. 792	. 843		. 750			

<sup>\*</sup> p<.05 \*\* p<.01

**Q1**.: C1. She died, C2. She is asleep, C3. I do not remember, C4. I do not understand, C5. Other reasons, C6. Non-response.

**Q4**.: C1. No (unable to), C2. Yes (able to), C3. I do not understand, C4. Other reasons, C5. Non-response.

I can show the correlation to infant is thinking that "playing is impossible" because of the "death", but an infant does not always understand the correlation between "death" and "to playing is impossible" with strong relationship.

On the other hand, the correlation coefficient between "dead" (Q1-C1.) and "playing is possible" (Q4-C2.) is - 0.116, between these response has a little negative correlation. About this, I can be said that the less the infant thinks someone as "dead", the more tendency that he/she thinks "playing is possible." But the significant probability of this correlation is 0.096, there is a strong likelihood this correlation is rejected.

For these reasons I can say that an infant can understand "to alive" in the relation of "playing is possible".

However the correlation coefficient between "is asleep" (Q1-C2.) and "playing is impossible" (Q4-

C1.) is 0.033, the correlation cannot be seen. Infants who think "playing is impossible" by cause of "is sleeping" are not many. Therefore, I can say the infant does not judge "playing is possible" or "impossible" as a reason of "is sleeping".

On the contrary, there is a little negative correlation between "is sleeping" (Q1-C2.) and "playing is possible" (Q4-C2.) (-0.018). This shows that if response of "is asleep" (Q1-C2.) is very few, response of "playing is possible" (Q4-C2.) tends to increase. In other words, the infants have tendency to think that we cannot to play while sleeping. But this correlation has no significance.

Certainly, in the picture book, a Rabbit's grandmother is depicted as her death is approaching and lying just like sleeping. But as mentioned above, the infants dose not judge relation between "is sleeping" and "playing is impossible" and these two have no relation for infant.

Consequently, as Kastenbaum and others thought, the infant can understand the difference between vivid acting existence and not moving state of dead, but their understanding about biological death is just a mental image and imperfect.

And that comes from their lacking of the biological knowledge. However, as the result of 2.1 suggests, there is the correlation between infant's understanding on death and on a physiological phenomenon. Therefore, I assume that the reason why their understanding of death is imperfect is

not necessarily connected to lack of their biological knowledge. The detailed study(consideration) on this problem is needed. There is necessity of analysis concerning every age.

# 2.3 The correlation between infants' understanding on death (Q 1) and their understanding on human beings concerning the society (ii) (possibility of dialogue with the dead) (Q 7)

The value of the correlation coefficient between "dead" (Q1-C1.) and "talk is impossible" (Q7-C1.) is very slight (0.151) (Table3.) I cannot see the correlation between the both.

Table3.
Statistics of the correlations between Q1. and Q7.

	Variable							
	<b>Q7</b> -C1	<b>Q7</b> -C2	<b>Q7</b> -C3	<b>Q7</b> -C4	<b>Q7</b> -C5			
Q1-C1. Correlation	. 151	040	082	. 045	154*			
Significant probability	. 031	. 571	. 244	. 527	. 029			
Q1-C2. Correlation	060	. 108	017	007	028			
Significant probability	. 396	. 127	. 805	. 921	. 689			

<sup>\*</sup> p<.05 \*\* p<.01

Q1. : C1. She died, C2. She is asleep, C3. I do not remember,

C4. I do not understand, C5. Other reasons, C6. Non-response.

**Q7.** : **C**1. No (unable to), C2. Yes (able to), C3. I do not understand, C4. Other reasons, C5. Non-response.

On the contrary, there is a little negative correlation coefficient (-0.040) between "dead" (Q1-C1.) and "talk is possible" (Q7-C2). I'd say about this negative correlation that it shows the tendency as the next. Namely, if there are a few infants who thinks "She is asleep" (Q1-C2.), at the same

time, there are more infants who thinks "talking is impossible" (Q7-C1.) with her. But in this case the correlation is not seen between these both, this shows that alike the paragraph of 2.2, infant does not judge "death" and "talk is impossible/possible".

Moreover, the correlation coefficient between "asleep" (Q1-C2.) and "talk is impossible" (Q7-C1.) is -0.060. This tendency show that if only a fewer the infants who thinks "is sleeping," (Q1-C2.), there are more infants who thinks "talking is impossible." (Q7-C1.). There is no correlation between the two.

The correlation coefficient between "is asleep" (Q1-C2.) and "talking is possible" (Q7-C2.) is 0.108. It is difficult to think that there is significant correlation.

In general, the person who "is asleep" is unable to "talk". However, infant's judgment have tendency there are influenced by contents of the story.

# 2.4 The correlation between infants' understanding on physiological function (respiration) (Q.3) and their understanding on activity of "play" (Q4)

The correlation coefficient between "breathing is impossible" (Q3-C1.) and "playing is impossible" (Q4-C1.) is 0.410. I can see the strong correlation between them. (Table4.) The significant

Table4.
Statistics of the correlations between Q3. and Q4.

	Variable						
	<b>Q4</b> -C1	<b>Q4</b> -C2	<b>Q4</b> -C3	<b>Q4</b> -C4 <b>Q4</b> -C5			
Q3-C1. Correlation	. 410**	206**	313**	205**			
Significant probability	.000	. 002	.000	. 002			
Q3-C2. Correlation	159*	. 260**	. 099	058			
Significant probability	.017	. 000	. 139	. 388			

<sup>\*</sup> p<. 05 \*\* p<. 01

- Q3. (respiration) : C1. No (unable to), C2. Yes (able to),
- C3. I do not understand, C4. Other reasons, C5. Non-response.
- **Q4.** (play) : C1. No (unable to), C2. Yes (able to), C3. I do not understand, C4. Other reasons, C5. Non-response.

probability is very small, a value of 0.000(p<.01), this is statistically significant. Therefore, a correlation of them is not rejected, I can say there is a significant relation between the two.

On the contrary, the correlation coefficient between "breathing is impossible" (Q3-C1.) and "playing is possible" (Q4-C2.) is -0.206. There are some negative correlations. This shows a tendency that if there are a few infants who response "breathing is impossible", conversely, there are a number of infants who response "playing is possible".

Similarly, some relations between "breathing is possible" (Q3-C2.) and "playing is possible" (Q4-C2.) are shows, their value is 0.260. However, this significant probability is 0.000, this is thought to be statistically significant (in null hypothesis), and their correlation is not rejected.

As indicated in research results mentioned above, the infants'

understanding on the possibility or impossibility of respiration and their understanding on activity to play are in correlation. The infants can rightly understand about human activity of playing in relation to physiological phenomenon of possibility or impossibility of respiration. The infants' concept of death is generally acquired from their biological understandings on the possibility or impossibility of respiration and also from human activity of playing.

# 2.5 The correlation between infants' understanding on a recollection (Q 8) and their understanding on dialogue (Q 7)

The correlation coefficient between "remember (keep in mind)" (Q8-C1.) and "talk is possible" (Q7-C2.) is 0.215. (Table5.)

Table5.
Statistics of the correlations between Q8. and Q7.

	Variable							
	<b>Q7</b> -C1	<b>Q7</b> -C2	<b>Q7</b> -C3	<b>Q7</b> -C4	<b>Q7</b> -C5			
<b>Q8</b> -C1. Correlation	.001	. 215**	079	. 046	188**			
Significant probability	. 991	. 002	. 247	. 501	. 006			
<b>Q8</b> -C2. Correlation	. 157*	182**	089	031	068			
Significant probability	. 022	.008	. 197	. 654	. 319			
<b>Q8</b> -C3. Correlation	054	111	. 332**	019	.001			
Significant probability	. 432	. 106	.000	. 784	. 984			

<sup>\*</sup> p<. 05 \*\* p<. 01

- **Q8.** (memory): C1. Yes (able to), C2. No (unable to), C3. I do not understand, C4. Other reasons, C5. Non-response.
- Q7. (conversation): C1. No (unable to), C2. Yes (able to), C3. I do not understand, C4. Other reasons, C5. Non-response.

The significant probability of this correlativity is 0.002, this correlation has significance.

On the contrary, the correlation coefficient between "no remember" (Q8-C2.) and "talk is possible" (Q7-C2.) is -0.182. The negative correlation is significant. In case of it means that if only a few infants answer "no remember", conversely, many infants answers "talk is possible.". The significant probability of this correlativity is 0.008, this value is not rejected because very small value.

Furthermore, the correlation coefficient between "no understand about remember or not" (Q8-C3.) and "no understand about a talk is possible or not" (Q7-C3.) is 0.332, the somewhat strong correlation is seen. The significant probability of this correlation is 0.000, this is thought to be statistically significant (from a null hypothesis), and their correlation is not rejected. The correlation between them is significant.

From these reasons, the infants do not think clearly on the memory of the deceased and on the possibility of talking with the deceased.

However, there is a significant case that an infant who thinks the Rabbit girl remembers her dead grandmother and the talk is possible with her. Therefore, the infants sympathize with the idea that we can talk with a person even if he/she is dead by remembering him/her, as was told in the story. But I cannot elucidate whether a voice in a talk is

a voice of a dead person in infant's memory or an infant's imaginary voice which he/she creates in his/her imagination.

# 2.6 The correlation between infants' understanding on a recollection (Q.8) and their understanding on activity of "play" (Q.4)

The correlation coefficient between "remember (keep in mind)" (Q8-C1.) and "no understand about the possibility of playing" (Q4-C3.) is -0.203. (Table6.)

Table6.
Statistics of the correlations between Q8. and Q4.

	Variable							
	<b>Q4</b> -C1	<b>Q4</b> -C2 <b>Q4</b> -C3 <b>Q4</b> -C4	<b>Q4</b> -C5					
Q8-C1. Correlation	. 050	. 122 203**	042					
Significant probability	. 465	. 072 . 003	. 540					
<b>Q8</b> -C2. Correlation	. 067	083 062	. 015					
Significant probability	. 321	. 220 . 357	. 827					
<b>Q8</b> -C3. Correlation	157*	049         . 368**	. 027					
Significant probability	. 020	. 468 . 000	. 692					

<sup>\*</sup> p<.05 \*\* p<.01

**Q8.** (memory): C1. Yes (able to), C2. No (unable to), C3. I do not understand, C4. Other reasons, C5. Non-response.

**Q4.** (play) : C1. No (unable to), C2. Yes (able to), C3. I do not understand, C4. Other reasons, C5. Non-response.

The negative correlation between them is seen somewhat, the significant probability of this correlativity is 0.003, their correlation is not rejected. This means that if there are a few infants who answer "remember the late grandmother", conversely, there are a number of infants who answer "unclear about the possibility of

playing with the late grandmother".

The contrary, the statistically significant probability is showed not about the correlation between "remember the late grandmother" (Q8-C1.) and "playing is possible" (Q4-C2.). This means that in infant's thought the both are not connected. This is corresponding with a result to a correlation between the next two.

That is, the correlation coefficient between "do not understand" (Q8-C3.) about remember or not and "do not understand" (Q4-C3.) about playing is possible or impossible is a result of 0.368. The significant probability of this correlation is 0.000, the correlation between the both is significant.

I think that infant is not judging the relations of memory and play in this research.

# 2.7 The correlation between infants understanding on death (Q 1) and their image about afterlife (Q 6)

The significant correlation is not seen between infants' understanding on death of a grandmother of the heroine and their image on afterlife. (Table7.)

Table7.

Statistics of the correlations between Q1. and Q6.

_	Variable						
	<b>Q6</b> -C1 <b>Q6</b> -C2 <b>Q6</b> -C3 <b>Q6</b> -C4 <b>Q6</b> -C5 <b>Q6</b> -C6 <b>Q6</b> -C7 <b>Q6</b> -C8						
<b>Q1</b> -C1. Correlation	. 101 . 118 . 083 . 118 . 079 . 044 . 149* 017						
Significant probabil	ity .150 .092 .234 .091 .259 .533 .033 .809						
Q1-C2. Correlation	024 046 027 026 031 007 024 041						
Significant probabil	ity .737 .515 .703 .714 .662 .921 .737 .560						

<sup>\*</sup> p<. 05 \*\* p<. 01

Q1.: C1. She died, C2. She is asleep, C3. I do not remember, C4. I do not understand, C5. Other reasons, C6. Non-response.
Q6 : 1. She went to the grave. 2. She is in the grave all the time.
3. She will go to heaven. 4. She went to the forest. 5. She rises to the sky. 6. She became a star. 7. She keeps sleeping (rest, lie beneath, remain idle). 8. Other reasons. 9. I do not understand.
10. Non-response.

# 2.8 The correlation between infants' understanding on physiological function (respiration) (Q. 3) and their understanding about afterlife (Q 6)

The significant correlation is not seen between infants' understanding on death in view of physiological function of respiration and their image on afterlife.

Table8.

# Statistics of the correlations between Q3. and Q6.

		Variable									
			Q6-	-C1 <b>Q6</b> -	-C2 <b>Q6</b> -√	C3 <b>Q6</b> -C	4 <b>Q6</b> -	C5 <b>Q6</b> -	C6 <b>Q6</b> -	-C7	<b>Q6</b> -C8
<b>Q3</b> -C1.	Correl	ation	069	. 087	. 036	101	. 077	. 028	022	. 00	0

 Q3-C1. Correlation
 -.069
 .087
 .036
 -.101
 .077
 .028
 -.022
 .000

 Significant probability
 .304
 .194
 .591
 .133
 .254
 .679
 .742
 .996

 Q3-C2. Correlation
 .111
 .040
 -.007
 .094
 -.073
 -.017
 .032
 .108

 Significant probability
 .099
 .547
 .917
 .162
 .274
 .805
 .634
 .107

**Q3.** (respiration) : C1. No (unable to), C2. Yes (able to), C3. I do not understand, C4. Other reasons, C5. Non-response.

**Q6**: C1. She went to the grave. C2. She is in the grave all the time. C3. She will go to heaven. C4. She went to the forest. C5. She rises to the sky. C6. She became a star. C7. She keeps sleeping (rest, lie beneath, remain idle). C8. Other reasons. C9. I do not understand. C10. Non-response.

# Conclusion

From the analyses above which used Pearson's product-moment correlation coefficient, I conclude that infants can understand relations between

<sup>\*</sup> p<. 05 \*\* p<. 01

physiological function of breathing and activity of play when considering the concept of death. In other word it may be said, the infant is able to understand relations with a physiologic function, death understanding, and social relations (activity of the play with others).

In addition, I can say that infants do not think the rabbit girl can never actualy play with her dead grandmother in her memory. However, infants have made judgments about the not relationship between death possibility of conversation. It is very difficult question why they do not think so. They may merely sympathize with the story or they may be acquired naturally as such in the story.

Finally, with respect to their image about afterlife, it shows that they have the image independently from their understanding on death containing biological meaning. It is also a difficult problem to show the causal relationship between their image of afterlife and their cultural or background. religious It is also difficult to answer the question, how the latter influences the former. I would like to do more detailed analysis as opportunity permits.

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# Gratitude and apology

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In addition, the investigation and research paper has published so late. I apologize from the bottom of my heart.

I am deeply grateful to all supporter for this investigation that I able to report this short article.

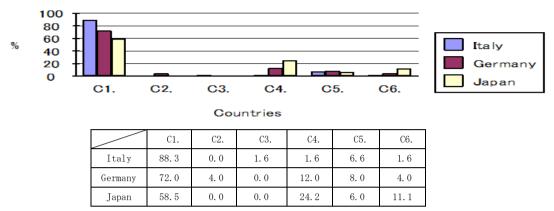
# [Supplementary data]

About the responses of the infant to twelve question items, I want to show the percentage of the choice of a gathered answer and those each country to the following charts.

[Q.1] A percentage point of a choices of an responses to a question 1 "What happened to Miffy's grandmother? (In two kindergartens of Germany: What did you feel when you heard this story?)"

[Figure1.]





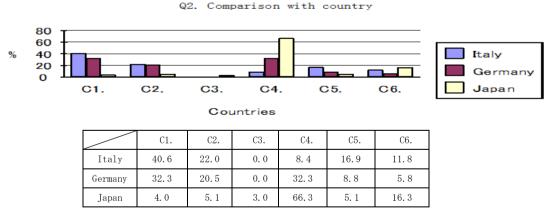
# Choices of responses:

C1. She died. C2. She is as leep. C3. I do not remember. C4. I do not understand. C5. Other reasons. C6.

Non-response: Number of valid responses in the subjects 60 (Italy), 50 (Germany), 99 (Japan) persons.

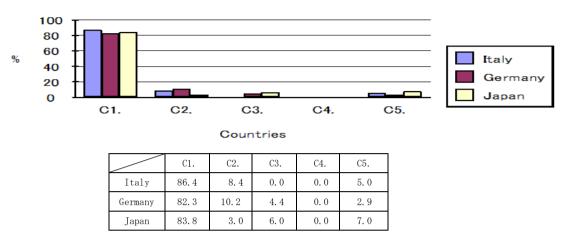
Effective response (significant figure) 60 (Italy), 50 (Germany), 99 (Japan) persons.

# [Q.2] A percentage point of a choices of an responses to a question 2 "Why did Miffy's grandmother die?" [Figure 2.]



# Choices of responses:

- C1. She was old. C2. She had illness. C3. It was an accident. C4. I do not understand. C5. Other reasons. C6. Non-response.: Number of valid responses in the subjects 60 (Italy), 68 (Germany), 99 (Japan) persons. Effective response (significant figure) 59 (Italy), 68 (Germany), 98 (Japan) persons.
- [Q.3] A percentage point of a choices of an responses to a question 3 "Can Miffy's late grandmother breathe?" [Figure 3.]



# Q3. Comperison with country

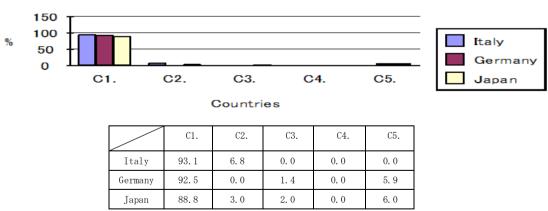
# Choices of responses:

C1. No (unable to). C2. Yes (able to). C3. I do not understand. C4. Other reasons. C5. Non-response.:

Number of valid responses in the subjects 60 (Italy), 68 (Germany), 99 (Japan) persons. Effective response (significant figure) 59 (Italy), 68 (Germany), 99 (Japan) persons.

# [Q.4] A percentage point of a choices of an responses to a question 4 "Can Miffy play with her late grandmother?" [Figure 4.]

Q4. Comparison with country

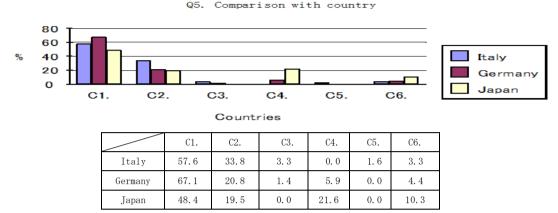


# Choices of responses:

C1. No (unable to). C2. Yes (able to). C3. I do not understand. C4. Other reasons. C5. Non-response. : Number of valid response in the subjects 60 (Italy), 68 (Germany), 99 (Japan) persons. Effective response (significant figure) 58 (Italy), 67 (Germany), 99 (Japan) persons.

# [Q.5] A percentage point of a choices of an responses to a question 5 "Do you think that

# sometime Miffy will be like her grandmother? " [Figure 5.]

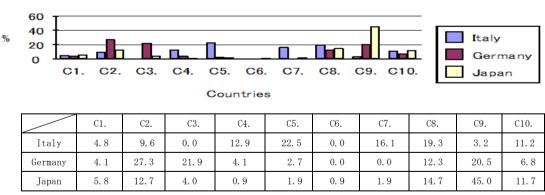


# Choices of responses:

C1. Yes (able to). C2. No (unable to). C3. She got old. C4. I do not understand. C5. Other reasons. C6. Non-response.: Number of valid responses in the subjects 60 (Italy), 68 (Germany), 99 (Japan) persons. Effective response (significant figure) 59 (Italy), 67 (Germany), 97 (Japan) persons.

[Q.6] A percentage point of a choices of an responses to a question 6 "What will become of Miffy's late grandmother?" (What do you think will be Miffy's late grandmother from now on?) [Figure 6.]

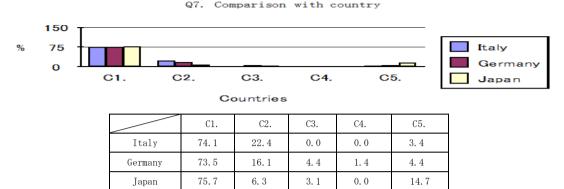
Q6. Comparison with country



Choices of responses:

C1. She went to the grave. C2. She is in the grave all the time. C3. She will go to heaven. C4. She went to the forest. C5. She rises to the sky. C6. She became a star. C7. She keeps sleeping (rest, lie beneath, remain idle). C8. Other reasons. C9. I do not understand. 10. Non-response.: Number of valid responses in the subjects 60 (Italy), 68 (Germany), 99 (Japan) persons. Effective responses (significant figure) 62 (Italy), 73 (Germany), 102 (Japan) persons. (the plural responses)

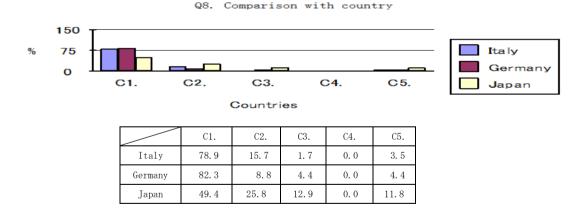
[Q.7] A percentage point of a choices of an responses to a question 7 "Can Miffy talk with her late grandmother?" [Figure 7.]



Choices of responses:

C1. No (unable to). C2. Yes (able to). C3. I do not understand. C4. Other reasons. C5. Non-response.: Number of valid responses in the subjects 60(Italy), 68 (Germany), 99 (Japan) persons. Effective response (significant figure) 58 (Italy), 68 (Germany), 95 (Japan) persons.

[Q.8] A percentage point of a choices of an responses to a question 8 "Does Miffy remember her late grandmother all the time?" [Figure 8.]



Choices of responses:

C1. Yes (able to). C2. No (unable to). C3. I do not understand. C4. Other reasons. C5. Non-response.:

Number of valid responses in the subjects 60 (Italy), 68 (Germany), 99 (Japan) persons. Effective response (significant figure) 57 (Italy), 68 (Germany), 93 (Japan) persons.

[Q.9] A percentage point of a choices of an responses to a question 9 "Do you think that everybody become like Miffy's late grandmother?" [Figure 9.]

#### 100 **I**taly 50 Germany 0 C1. C2. C3. C4. C5. C6. Japan Countries C2. С3. C1. C4. C5. C6. Italy 67.7 22.0 5.0 0.0 0.0 5.0 Germany 74.9 17.6 0.0 0.0 4.4 2.9 Japan 47.3 19.9 0.0 2.1 13.6 16.8

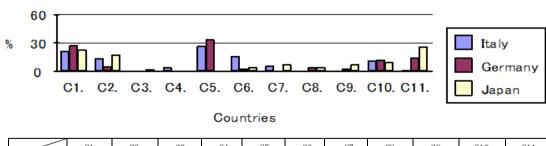
# Q9. Comparison with country

# Choices of responses:

C1. Yes. C2. No. C3. She got old. C4. I do not understand. C5. Other reasons. C6. Non-response. :

Number of valid responses in the subjects 60 (Italy), 68(Germany), 99 (Japan) persons. Effective response (significant figure) 59 (Italy), 68 (Germany), 95 (Japan) persons.

[Q.10] A percentage point of a choices of an responses to a question 10 "What kind of feeling do you have when you heard the story? Do you feel sad or pity?" [Figure 10.]



Q10. Comparison with country

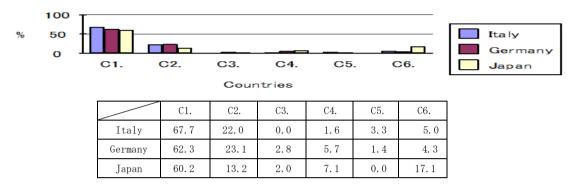
	C1.	C2.	C3.	C4.	C5.	C6.	C7.	C8.	С9.	C10.	C11.
Italy	21.3	13.3	0.0	3. 9	26.6	15.9	5. 3	0.0	0.0	10.6	1. 3
Germany	26.9	5. 1	0.0	0.0	33.3	2. 5	0.0	3. 8	2. 5	11.5	14.1
Japan	22.8	17.5	1. 7	0.0	0.0	4. 3	7. 0	4. 3	7. 0	9. 6	25.4

#### Choices of responses:

C1. Sad. C2. Pity. C3. Lonely. C4. Bad. C5. Good. C6. Glad. C7. Fun. C8. Interesting. C9. I do not understand. C10. Other reasons. C11. Non-response. : Number of valid response in the subjects 60 (Italy), 68 (Germany), 99 (Japan) persons. Effective responses (significant figure) 60 (Italy), 78 (Germany), 114 (Japan) persons. (the plural responses)

[Q.11] A percentage point of a choices of an responses to a question 11 "Do you want to rescue Miffy's grandmother?" [Figure 11.]

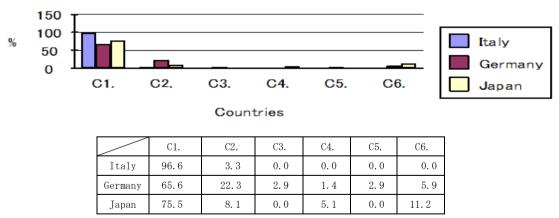
Q11. Comparison with country



Choices of responses: C1. Yes. C2. No. C3. Impossible. C4. I do not understand. C5. Other reasons. C6. Non-response. : Number of valid response in the subjects 60 (Italy), 68 (Germany), 99 (Japan) persons. Effective response (significant figure) 59 (Italy), 69 (Germany), 98 (Japan) persons.

[Q.12] A percentage point of a choices of an responses to a question 12 "Would you be kind to Miffy? Do you want to be kind to Miffy?" [Figure 12.]

Q12. Comparison with country



# Choices of responses:

C1. Yes. C2. No. C3. Impossible. C4. I do not understand. C5. Other reasons.

**C6. Non-response.** : Number of valid response in the subjects 60 (Italy), 68 (Germany), 99 (Japan) persons. Effective response (significant figure) 60 (Italy), 68 (Germany), 98 (Japan) persons.