Models of Life-span Developmental Psychology:
A Construction of the Generative Life Cycle Model
Including the Concept of "Death"

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生涯発達心理学のモデル：
「死」の概念を含む生成的ライフサイクル・モデルの構築に向かって

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Introduction

At the dawn of the 21st century, it appears that we human beings have lost any clear vision about our future. It seems that it is time to undertake a radical critique of the way of looking at things, which was implicit during the last century. As a researcher in life-span developmental psychology, I believe that what is required is a paradigm shift in our view of human beings and development and the construction of a new model in order to obtain some idea of how human beings should live in the future.

I would like to attempt to construct a new model of life-span developmental psychology through the following approaches. In the course of this paper I will clarify the presuppositions of the Western modern developmental model upon which we have so far relied. One of the presuppositions that I will discuss is the view of human beings represented by the individual model. Secondly, I will compare it with the contextual model included in Japanese traditional iconographies. Thirdly, I will discuss the progressive linear model as another presupposition on which developmental theory has been based. Fourthly, I will analyze the recent life-span developmental model, and Erikson's life cycle model and the concept of generativity will be considered as my fifth topic.

I will then move on to discuss the way of constructing a model showing a new vision for the 21st century. Finally, I would like to propose a generative life cycle model (GLCM) by explaining with reference to the imaginary drawings of life cycles and recycles based on Japanese folk psychology and life stories. I will consider what contributions of the generative life cycle model can make to life-span developmental psychology.

1 . Individual Model

In danger of oversimplification, one of the dominant presuppositions of history up to the 20th century, which I would like to consider first of all, is the individual model. It reflects the view of human beings in Western culture that originated with the ancient Greek philosophies and has gained sophistication through modern thought.

It is a matter of common knowledge that the word "individual" has the same origin as the word "atom," which means an ultimate entity that cannot be further divided. In modern physics, the atom is no longer treated as an ultimate simple substance. Yet, even nowadays in the field of psychology, an individual is still the key basic unit. It has been assumed that each individual can exist independently of his or her context and should hold a consistent identity despite changes in the natural or social environment. The aggregation of concepts that consists of the above-mentioned hypotheses can be called the individual model. In the individual model, contexts such as ecological, cultural, social and historical ones are little taken into account and only the development of individuals are schematized independently.
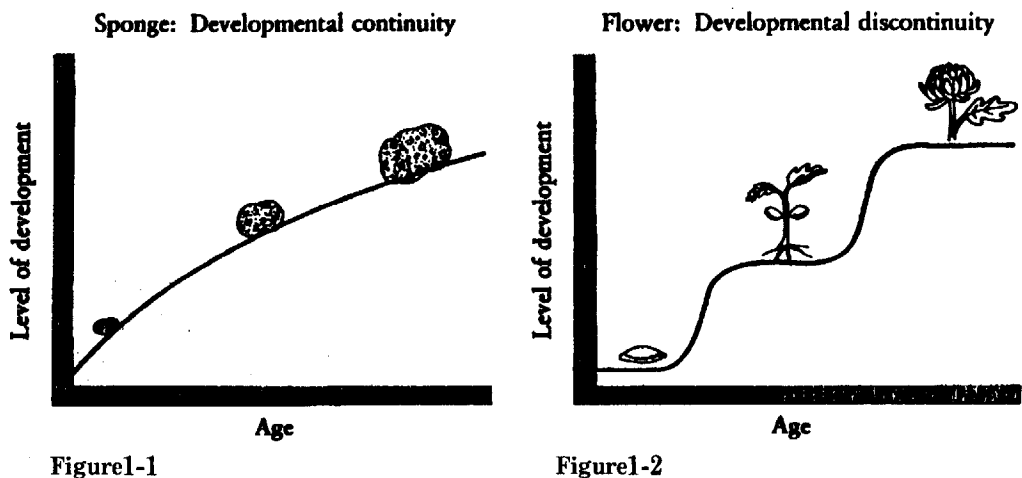
Let us take a look at Figures 1-1 and 1-2 (Cole, & Cole, 1989) as an example to illustrate the basic presuppositions on which developmental psychology is based. Here, I do not intend to criticize this particular book for its orthodox contents as one of the typical texts of developmental psychology. There have been many similar schematic explanations. Apart from specific topics of these figures (developmental continuity and discontinuity), I would like to question the fundamental framework. How has human development been viewed? What are the implicit presuppositions behind these figures?

In Figure 1-1, the sponge represents a primitive sedentary aquatic invertebrate with a soft porous body. Most sponges live in seawater. Since human beings are terrestrial animals, our ecological environment is completely different from that of the sponge. However, this difference is completely ignored in such individual modeling. In Figure1-2, the chrysanthemum represents a terrestrial creature like a human being, but the plant is separately schematized from its context that includes various ecological environments such as soil, sunlight, and seasons. Of course, these authors are well known to have taken initiative in carrying out research emphasizing the socio-cultural contexts of the development. However, the way of schematizing the development seems to be still based on the traditional model of individualism.

Recently, in addition to the emphasis of socio-cultural contexts, the individual model has faced criticism as great importance has been attached to interpersonal relationships (Gilligan,C. 1982;

Archer, S.L.1993 etc.). Although this criticism is similar to the argument puts forth in this paper, it is still centered on the individual. In other words, it assumes the model of interdependency between an individual self and other individuals. Hence the fundamental concept is still an individual, and the connection or the network of individuals seems to be merely an extension of the individual model.

On the other hand, my view is that a human being is not "an individual" isolated from its surroundings but "a contextual" essentially embedded in the psychological topos or the environment that enables personal growth. I have graphically expressed this idea by "a wrapped self" using a nested structure (Yamada,1988; Yamada, & Kato, 1993). This type of view of human beings could be called the contextual model in contrast to the individual model.

Sponge: Developmental continuity　　**Flower: Developmental discontinuity**

Figure1-1　　　　　　　　　　　　　　　Figure1-2

Examples of Developmental Models:
1) Individual Model and 3) Linearly Progressive Model
(Cole, M., & Cole,S.R. 1989 *The development of children*, pp.9.)
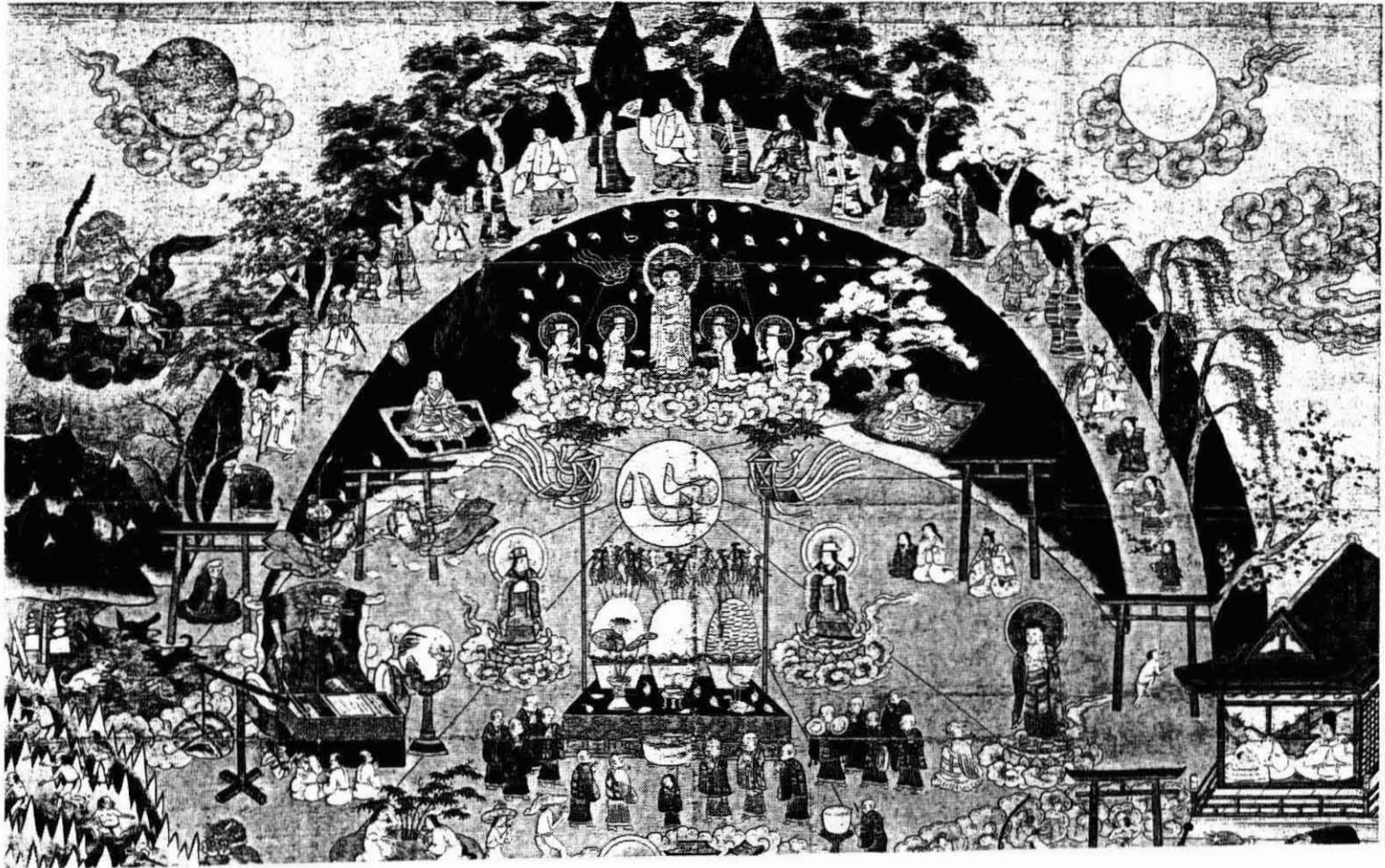
2. Contextual Model

A model of developmental psychology should be schematically presented in a simplified form since all conditions cannot be depicted in a single figure. However, the individual model and the contextual model differ in views that are regarded as most fundamental or indispensable. For comparison with the individual model, let us look at a figure representing the life cosmology of Japanese traditional folk culture. Figure 2 is apart of "Kanshin Jukkai Mandala" and shows the stages of human life (Daienji Temple). This chart, which helped to narrate religious teachings orally to those who could not read sutras, was used by missionary nuns called "Kumano Bikuni" as a tool for spreading Buddhism from 17th to 19[th]century.

In the limited space of this figure, seasonal changes are symbolically depicted as the context or background for personal development. The figure is intended to show that human beings change according to what surrounds them: a house, mountains, fields and seasonal changes. Thus humans

are not depicted as isolated individuals.

The people shown in this figure are not naked like sponges or flowers; they wear clothes and have personal belongings to show the social, cultural and historical contexts in which they live. It has been assumed that sponges and flowers exist universally and consistently irrespective of spatio-temporal conditions. On the other hand, the people shown here are affected by the environmental or historical conditions in which they live. The chart is not a universal abstraction but a generalization that has restrictions derived from particular cultural, social and historical contexts. A scene of childbirth is depicted in the bottom righthand corner of the picture (Figure 2) and a dead person in the bottom left-hand corner. The picture shows that the child is born in an aristocrat's fine mansion, which is its social background. The newborn baby is held and taken good care of by the parents. By contrast, the dead person looks miserable: he is left alone in the field for his corpse to be eaten by stray dogs or birds. This representation of transient life reflects the Buddhist sense of value; social position or money in this world is meaningless. Although an analysis of Buddhist values would no doubt be psychologically interesting, I do not intend to attempt such an analysis in this paper. What I would like to emphasize here is that the people in the chart are not naked individuals but humans embedded in meaningful contexts.

Another outstanding feature of the picture is that it does not depict only one life of the individual with a consistent identity. Rather, identities of people are changed from one stage to another. At the beginning and end of life, sex is ambiguous but in the middle there is a mix of male and female. People wear different costumes, indicating the diversity of their social classes. Collective people from various levels of society represent a totality of human life cycle. In short, the picture tries to generalize "human life" by illustrating various groups of people that are concurrent and coexistent at different time axes, rather than focusing on the consistent identity and development of one individual.

Figure2

An Example of The Fork Representation of Human Life, Japan:
2) Contextual Model and 4) Model of life-span development
(A Part of Kanshin zyukai Mandara, Daienji Temple, 19C, Amino, Y, etc. 1999)

Degré des âges, bois de fil sur papier vergé, Epinal, Pellerin, gravé par Georgin, vers 1835

Figure3

An Example of The Fork Representation of Human Life, France:
1) Individual Model and 4) Model of life-span development (Maquet, F Ed. 1995)

3. Linearly Progressive Model

The linearly progressive model seems to have long influenced our way of thinking as the individual model. This model would appear to have been dominant since the late 19th century under the influence of Darwin's theory of evolution and modern industrial progressivism. Developmental psychology is a science closely associated with values of progress, evolution, acquisition, development and growth.

Let us take another look at Figures1-1 and 1-2 as examples illustrating the model of progress. What are the implicit assumptions behind these figures? It is possible to indicate the following four points:
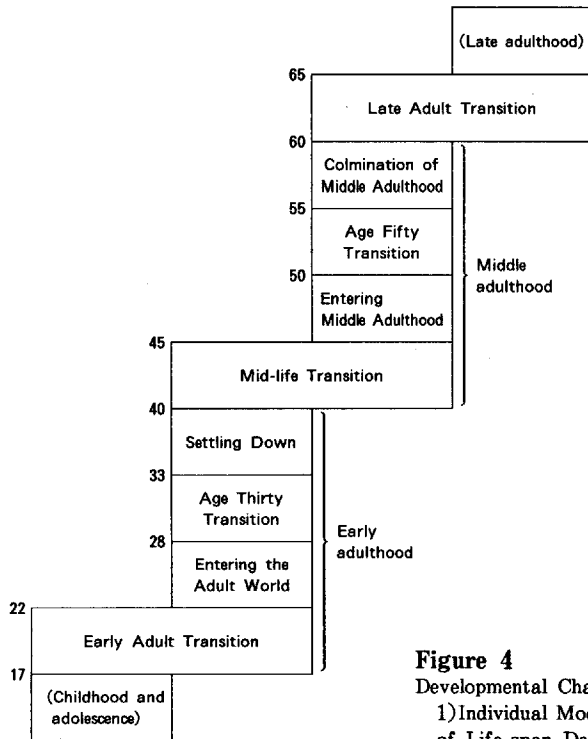
(1) Firstly, the development of human beings is represented by other species with simpler structures. Why are a sponge and a chrysanthemum used to explain human development instead of a human being? One implicit assumption behind this is that humans and other species share the same basic mechanism. Another is that it is easier to explain higher structures by reductionism.

(2) Secondly, a typical description of the developmental process shows the horizontal axis to represent the age and the vertical axis to represent the level of development measured in terms of some sort of performance. The description of functional relations by coordinate axes reflects the revolution from quality to quantity, which marked the change into an epoch-making functional worldview in the 17th century (Cassirer,E. 1910).

Figure1-1 shows a simple quantitative increase or a continuous change while Figure1-2 shows developmental stages including qualitative transformation. In both figures, development is expressed simply by a one-dimensional change instead of as multi-dimensional and multi-directional changes. Qualitative change is reduced to one-dimensional quantitative change as shown in Figure1-2. This means that the individual differences are interpreted in linear and quantitative ways. For example, the direction and goal of development is the same but the speed of development is different; one attains a certain stage of development earlier than others. Qualitative change was interpreted in terms of the size of the step required to attain a certain level; therefore even qualitative change was expressed quantitatively. In other words, the course of development is considered to be a single straight highway instead of various paths with multiple goals.

(3) The third assumption is progressivism in which development is considered as the process of ascending, rising, improvement, competence or advancement with aging. In Figures1-1 and 1-2, development is represented by a curve sloping up to the right or growth where no stagnation, descent or decline is involved. Though not clearly indicated, the "age" in these figures seems, as usual in developmental psychology, to cover the period from infancy to adolescence. These figures appeared in *The development of children,* so it is natural that the authors should have focused on early ages. Nevertheless, is it not important to take the latter half of an individual's life into consideration when discussing childhood? Figure1-2 shows the process of growth of a chrysanthemum from seed to blossom: from birth to adulthood. The subsequent process in which the flower withers and falls to turn into seeds for the next generation is omitted here. Surely, even as a model for childhood, the

perspective of total life is important.

65	(Late adulthood)
	Late Adult Transition
60	
55	Colmination of Middle Adulthood
	Age Fifty Transition
50	
45	Entering Middle Adulthood
	Mid-life Transition
40	
33	Settling Down
	Age Thirty Transition
28	
	Entering the Adult World
22	
	Early Adult Transition
17	
	(Childhood and adolescence)

Figure 4
Developmental Chart in the Era of Early and Middle Adulthood
1) Individual Model, 3) Linealy Progressive Model, and 4) Model
of Life-span Development (Levinson.D.J., 1978)

4. Model of Life-Span Development

Again, let us take a look at Figure 2 and compare it with the linearly progressive model shown in Figures 1-1 and 1-2. Figure 2 includes not only the first half of the individual's life but also the latter half or the process from decline to death. The average life expectancy at the time this picture was originally drawn in the 17th century is supposed to have been less than half that of the present Japanese life expectancy, over 80years old. Only a few people lived to a ripe old age. Nevertheless, it should be noted that the way in which old people have bent backs or carry their canes is carefully observed and expressed in detail in the limited space of the picture.

Today, old people are everywhere to be seen. However, generally speaking, we do not observe differences between 60-year-olds and 80-year-olds so closely that we can describe their mental and physical changes correctly. Now, bearing in mind that the first twenty years are divided into several developmental stages, we are sensitive to changes that occur during each stage. In contrast, we neglect the changes in the last fifty years from 30 to 80 years old.

As pointed out by Ariès (1960), the way the life cycle is expressed is the reflection of people's semantic world in a given time period. In Figure 2, the prime of life comes in middle age when the

individual has reached the stage of maturity and assumed social responsibility. This is in striking contrast to the modern situation where young adults are most valued, while less attention is paid to the role of the middle-aged or the meaning of aging.

Among the pictures showing life stages which are found around the world, it is not just Japanese pictures of this kind that deal with the entire life process or include a careful depiction of old age; pre-modern Western pictures have the same tendency. Figure 3 is a picture of life stages drawn in France during the 19th century (Maguet, 1995). As compared with the Japanese version shown in Figure 2, the French version does seem to be based on the individual model. Focus is placed on individual persons rather than on their contexts and each life stage is represented by a couple consisting of one male and one female. In the Japanese version, men and women appear in different life stages. The stage of old age is represented by human beings whose sexes are impossible to distinguish. On the other hand, in the French version, male and female identities remain strictly distinguished from each other throughout the whole life course. However, what is common to both versions is that the prime of life is reached during adulthood and the process of decline of people aged 50 or more is detailed, covering the entire "life-span" from birth to death.

We cannot make an overgeneralization on the basis of the two examples mentioned above, and careful examination by historians would be necessary. However, these examples may be enough to give us reason to suspect that excessive emphasis on childhood and adolescence is a mere reflection of the modern progressive attitude toward life. Furthermore, in developmental psychology, where only very limited kinds of developmental models have been used so far, it may be meaningful to use a greater variety of models.

Based on the progressive model as shown in Figures1-1 and 1-2, many developmental theories were constructed by psychologists such as Jean Piaget and Sigmund Freud. "Development" means an ascending change or a transition into completeness. According to such theories, time is progressive, irreversible and unidirectional while stagnation has a negative meaning and regression implies an abnormality. Whether development is treated as a process of continuous change or as one divided into many stages, regardless of the pace of development of individuals, it was thought that basically everyone takes the same course in the same direction. Traditionally developmental psychology covered the period from infancy to adolescence, but few were concerned with the period from adulthood to old age.

Recently, developmental psychology has transformed itself into life-span developmental psychology in which the time range covered has been extended to take the total life into account. For example, Baltes (1987) pointed out that social, cultural and historical contexts were important, and that what was needed was a multi-dimensional model including not only acquisition and ascent but also loss and decline. His idea does not seem to be an improvement on the unidirectional model. In spite of this, his model of successful aging is still remains an extension of the individual, progressive functional model (Baltes & Baltes, 1990).

Levinson (1978) criticized the conventional approach of developmental psychology

characterized by special attention to infancy and adolescence and insisted on the importance of development in adulthood. Taking the four seasons as an analogy for life, he argued that, just as it was meaningless to say that spring, for example, was better than autumn, in the same way, no stage of life should be given special priority over other stages. However, despite their use of the metaphorical expression "four seasons of life," the chart (Fig. 4) produced by Levinson indicates a stepped progressive model.

The recent trend towards a perspective of life-span development means that more attention is now paid to development in the latter half of life than before. Nevertheless, as Figures 4 suggests, while such a shift to life-span developmental psychology might have altered certain conceptual approaches, representations based on the individual or progressive model continue to be used widely.

As indicated by the expression "successful aging" which is frequently used in life-span developmental psychology (Baltes & Baltes, 1990 etc.), these ideas about human beings are often merely an expansion of views on the first half of life. Such ideas assume in general that "progress" in the first half of life should continue and that one should go on growing, struggling, acquiring and succeeding. Why should we think of life metaphorically in terms of struggle and winning? Why do we believe that we should continue to succeed or progress? As we consider our lives through these terms and concepts, we should evaluate them to classify several grades like psychological IQ tests. Is judgment or evaluation at the end of our lives needed for making us happy? Who decides whether our lives are successful? We can select other words such as "meaningful" "tasteful" and "impressive" to represent our lives. The Kanji characters of Japanese word "meaning" involves "Aji" that means "taste", "flavor", "sense", "impression", "appreciation", "enjoyment" and "experience." We use this word "Aji" in such examples of situations. "It will take you years to rightly *appreciate* a man like him." "Nobody that hasn't *gone through* such a frustrating experience could understand how sad I feel". "That's pretty *impressive*!"

Even if someone's life ended in complete failure, he could feel a variety of tastes such as bitter, sour, sharp, salty, dry, spicy, smoky, dull, cloudy, and a little bit of sweetness. He could tell his life story to other people who could not feel such a strictly bitter taste, and develop their latent abilities for rich tastes. Though his life was not successful, his life could have plenty of meaning and have been fruitful in human experiences. Meanings of one's life should not be compared to IQ tests or the Last Judgment. We cannot evaluate if the most delicious food is the fruit, the vegetable, the fish, or the meat. There is no accounting for tastes in a simple way. Everybody seems to have one's own experience of life like one's taste.

5. Erikson's Life-cycle Model and Generativity

I have examined the fundamental ideas about developmental psychology, and have discussed the individual vs. the contextual model, the lineally progressive model, and the life-span model. I will now reconsider the epigenetic chart by Erikson (1950,1982,1986). In particular, I would like to reexamine Erikson's theory of life cycle and his concept of generativity.

It is obvious that Erikson's model is based on the view of human beings found in the individual model because it attempts to maximize the power of the human ego and stresses the concept of identity and the consistency of an individual. However, Erikson's model employs not just the individual model but also the contextual model. The scope of his concept of identity includes interactions with social contexts in establishing identity.

In the chart of Erikson's model of epigenesis (epi= "above"), where he takes life as a gradual, progressive integration, acquisition of wisdom in old age is positioned as the highest stage of integration. Therefore, his model is a progressive model. However, unlike Piaget and Freud who overestimated childhood, Erikson (1982, 1986) focused on adulthood and old age as well as childhood. Along with Jung (1933), who valued individuation in the latter half of life, Erikson is one of the pioneers in his presentation of a model of life-span development.

As discussed above, Erikson's model may be considered as a mixed model, which combines the individual model with the contextual model, and also the progressive model with the concept of life-span development. The chart is not a scheme of a single linear functional relation reduced to quantities. His model may be likened to a textile interwoven with woofs and warps. It is not a tree model in which progress, ascent and differentiation take place linearly, but a model of a textile, rhizome or context. His vision of life-span development based on the contextual model is expected to contribute greatly to psychology in the 21st century.

At first point, we may wonder why Erikson called his chart a "life cycle". Erikson's model looks like a texture made up of crossings of coetaneous lines from society to the individual and temporal lines from the past to the future. Though his term "epigenesis" does not suggest a simple ascent, his concept of life implies a linear and non-recurrent time perspective and is similar to the linear progressive models. The word "cycle" implies circulation, and the term "life cycle" originally seems to refer to circular time perspective.

Erikson's attitude can be clearly seen in his expression, "the cycle of individual life coming to a conclusion." Is it right to think that the life "completes" itself within each individual as indicated by the title Erikson gave one of his books (1982)? The time perspective of a human life that has both the origin and the goal seems to be in a cosmology of Christianity, which is in danger of oversimplification. Origin is the starting point where every creature is created and the complete end is the Last Judgment. One's life is assumed to be similar to Chiristian time perspective that divides the time between the origin and the goal. This time perspective is employed in linear models but not in circular ones.

The second point that merits discussion is Erikson's emphasis on the ego and the individual life course rather than the life cycles of multiple generations. Erikson looked at two types of life: the individual life (which has a conclusion) and the lives of generations (the cycle of one generation related with the next generation and future generations). Related to the latter is the concept of generativity that I consider most noteworthy in his theory.

Though he did not discuss it enough, generativity may be considered as a more important idea

than the concept of identity that made Erikson famous. In the concept of identity, though focus is placed on the "individual" and "society," concern remains with the ego of the individual. On the other hand, generativity involves "a concern for establishing and guiding the next generation" and is connected with intergenerational relations beyond the ego of the individual (Kim & Harrison, 1999; Yamada, 1999, 2000). It is a critical concept throughout life time, though it is particularly meaningful in the latter half of life (McAdams & de St. Aubin, 1998). This concept is related to communication between generations, educational processes, genetic transmission and concerns with global pollution. It suggests we should care for not only our own generation but also for the next and future generations. Generativity captures the process of creating a vision of our responsibilities for future generations and societies.

Generativity is a word coined by Erikson from the words "generation" and "generate." This concept suggests that the life is a succession from the parents' generation to that of the children in the sequence of generations: transmission of life to the next generation. Erikson (1965) states it as follows: "The cogwheeling stages of childhood and adulthood are, as we can see in conclusion, truly a system of generation and regeneration".

Succession from one generation to the next is a generative process to "generate and regenerate" but not a reproductive process in which the same copy is produced repeatedly. Such succession involves a new creation. Here, "generating" means "creating and producing things, people, and outcomes that are aimed at benefiting, in some sense, the next generation, and even the next. "Therefore, "generativity" is the opposite of "stagnation." The word "generate" is cognate with the word "gene"; the process of generating something new looks like the process of making a variety of combinations from genes inherited from parents in accordance with a finite number of DNA arrays.

The third point I would like to discuss is the important concept that "generate" is different from "create". To create something means to cause it to happen or come into existence. To create something there should be a creator who has a purpose, design, and will to make it, or an agent that causes the creation. In the process of creation, the point of origin is starting from nothing and the goal is the point where the creation is completed or finished. On the other hand, to generate something means to cause it to begin, especially when it then continues to exist or develop by itself. The generating process is acting, continuing, and changing by itself, and does not need a creator and does not have a clear starting point or ending.

In examining the concept of generativity, Kotre (1999) explained its difference from creativity. "Generativity meant that something old was passed on, whereas creativity meant that something new was made... Generativity is creativity that lasts. Creativity ends once a product is made, but generativity goes on to take care of the product as it seeks an independent life. If you give birth to a new business, you have been creative. But you are not generative until you pass it on to successors."

Erikson (1950) viewed the child-parent relationship as follows: The child who is brought up to because an adult becomes in turn a parent who brings up someone else. In his generative view, human being is not a "being" but a "becoming." He considers that adults too should not stagnate but change

their lives by generative ways. Erikson thought that the meaning of becoming an adult was to become a parent in a broad sense, or a person who responsibly cared for the next generation as a citizen or community member. To become an adult is not simply to grow up but to become a responsible parent. A responsible parent means a person who cares for the child to whom he/she has given birth.

Erikson's viewpoint is important in connection with the narrative approaches such as la génétique, life stories and narrative therapy. Kotre (1984) elaborated on the concept of generativity to develop it into narrative psychology that concentrated on listening to people's life stories. He defined generativity as follows: "a desire to invest one's substance in forms of life and work that will outlive the self." McAdams and de St. Aubin (1998) studied generativity in association with life stories and found that highly generative adults told stories containing elements of sacrifice, recovery, growth, learning and improvement, to a greater extent than less generative adults. The stories of life depended on the meanings one gave to one's experiences, even if this had negative aspects. In these approaches, reconstruction or retelling of a person's life story plays an important role in changing his/her life (Bruner, 1990; Yamada, 2000).
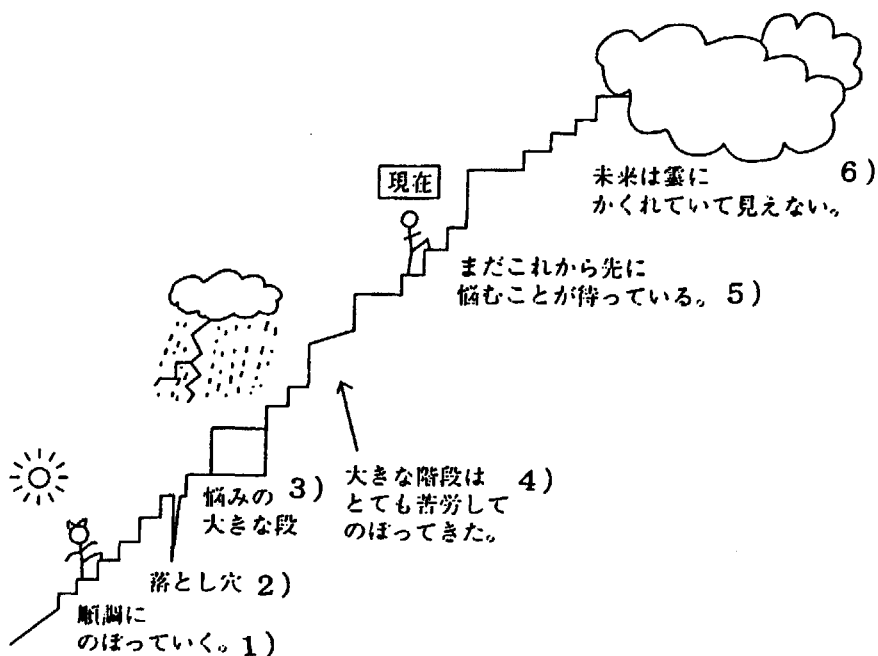
It is important to point out that Erikson did not sufficiently discuss "death" in his model. He presented the process of integration from birth to wisdom in old age as a progress, but his life cycle chart seems to lack adequate consideration and significance of such issues as "decline," "loss" and "death." These issues should be discussed as central issues, and not be neglected nor be looked at through a negative point of view. Based on these critical considerations of developmental models, I will present a generative life cycle model that includes decline, loss and death. I will show the circular model based on multiple circulations: individual life cycle, generation cycle, and spiritual cycle.

6. Generative Life Cycle Model (GLCM) :
An Apple's Life Cycle and Recycle

A life cycle model should not be a mere extension of the individual model or the linearly progressive model. Human beings cannot avoid aging, dying, declining and suffering loss. How can we redefine loss and death in such a way as to assign meaningful values to them in connection with maturity and generativity, instead of regarding them as only negative experience?
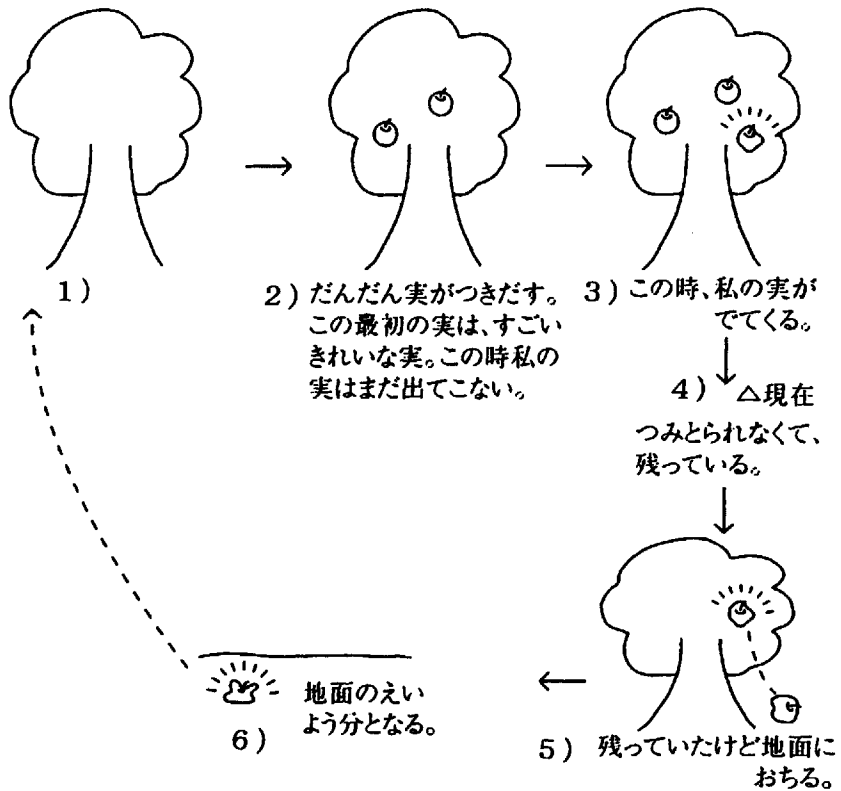
I will present another model named Generative Life Cycle Model (GLCM) illustrated in Japanese folk images. Next, I will discuss circular cosmology and concepts of death and rebirth in Japanese naive images, which are fundamentally common with European cultures. Finally, I will reconsider and expand the concept of generativity and I will integrate it into my generative life cycle model.

現在

未来は雲に
かくれていて見えない。 6）

まだこれから先に
悩むことが待っている。 5）

悩みの 3）
大きな段

大きな階段は 4）
とても苦労して
のぼってきた。

落とし穴 2）

順調に
のぼっていく。 1）

Figure 5
An illustration of Life Image of Linear Progressivism: Climbing Up

The six stages of my life: an illustrated example of Japanese images of their lives (Yamada, 1999)
1) I climb at a steady pace.
2) A pitfall
3) A large obstacle (a problem)
4) I overcome the obstacle with much effort and climb higher.
5) 〈Present〉 More obstacles await me.
6) The future cannot be seen as it is hidden in the clouds.

1）

2）だんだん実がつきだす。
この最初の実は、すごい
きれいな実。この時私の
実はまだ出てこない。

3）この時、私の実が
でてくる。

4）△現在
つみとられなくて、
残っている。

6）地面のえい
よう分となる。

5）残っていたけど地面に
おちる。

Figure 6
An illustration of Generative Life Cycle Model : An Apple's Life Cycle

The six stages of my life : an illustrated example of Japanese images of their lives (Yamada, 1999)
1) (There is a tree.)
2) The tree begins to bear fruits. The first fruits are very beautiful. My fruit (myself) has not appeared yet.
3) My fruit (myself) appears at this stage.
4) 〈Present〉 My fruit is not picked and I remain on the tree.
5) I have stayed behind, but I fall to the earth.
6) The earth is nourished (by my fruit).

I call my model a "Generative Life Cycle model (GLCM)". It is abstracted from key concepts contained in the folk image and cosmology. GLCM is defined as looking at one's life through seven concepts. 1) One's life cycle has fundamental relationships with former and latter generations and is incorporated into a larger circle of life. 2) Time perspectives of one's life course and generations' lives are like the circle(s), the spiral(s), or the recurrent form(s). 3) Movements of turning, rotating, changing and/or transition are basic and natural in one's life and generations' lives. 4) The movements of turning and transition are generated and maintained by a little cause or action from outside because the circle itself is a mobile system. 5) The transitions of one's life and generations' lives move around the circle(s) or spiral(s) that have the action going back to earlier position. 6) The beginning and the ending are not clearly separated from other parts on the circle. 7) Any part of one's life does not have a privileged status on the circle.

At first, I would like to show two different images of life courses by "Image Map of Life" (Yamada, 1999). The purpose of my research was to understand the visual perspectives of people's life courses at a glance by telling their life stories through drawings. The research method was a kind of visual narrative that has been called the "Image Drawing Method (IDM)" (Yamada, 1988). I have collected a variety of image drawings for understanding naive concepts such as "Self and Mother", "Life Story: past, present, and future", "Self and Place", and "This world and the Next world" that people have in their daily lives. Based on the visualized images drawn by IDM, I have constructed figurative models of life-span development (Yamada, 1988, 1999; Yamada & Kato, 1993, 1998, 2001 etc).

My procedure was as follows. The subjects were 874 university students. I provided a blank paper of A4 size to the subjects and asked them. "Please draw a map of your life depicting the image you have of your life. Please explain your drawing." "You need not put your name on the sheet. Please draw your images just as you like and do not worry about your drawing skill. This is not a project test, a personality test, or an achievement test and our aim is not to evaluate you individually. I would only like to appreciate the variety of images."

The reason I instructed them to draw "a map of life" and not "an image of life" was to prevent them from trying to express total life by some abstract symbol such as a heart. I thought that requesting them to draw "a map" would encourage them to convert their images of life from temporal concepts into topographical ones on the two dimensional sheet, and thus help them to express their images by a simplified composition involving orientation, process and milestones of the passage of life.

Figure 3 shows a typical drawing by one of the subjects. The drawing depicts a person going upstairs as in mountaineering. I have classified this type of image as belonging to the model of progress and ascent. Many students (42%) drew this type of image. The outlook on life as indicated by the model of progress and ascent is seen not only in texts of developmental psychology; perhaps it is a typical image of life shared by many people in the modern age.

I would like to compare this model with Figure 6: an image of an apple's life cycle and recycle.

I have classified the latter image as belonging to the circular model. Not many students made drawings that suggested in any way a circular model (12%). While Figure 6 is a unique drawing in this type, it seems to represent a typical image of "Generative Life Cycle model (GLCM)" and it seems to offer significant implications related to generativity. The following six points may be noted as importance in Figure 6.

(1) When does a self's life begin? — A self's life does not begin with his/her birth. It is a part of a circle of successive generations.

First of all, in this drawing it is clear that "my life" does not begin with the birth of the self as an individual. A tree, representing the large environment or the place that wraps and gives life to apples, is drawn first, followed by the "initial two fruits" which are supposed to represent the "parents." Then, "myself (my fruit)" as the third motif is born.

In Figure 6, the image of life is composed of six phases, two of which come before the birth of the self. This image presents a contrast to the model of life-span developmental psychology in which the focus is on the individual life where the starting point is the birth of self (including the period of pregnancy).

The concept of the self in this image seems to be different from that of the individual model. "My apple" and other apples were drawn by similar figures. The uniqueness or identity of myself is not emphasized. The self is one member of a family of apples and one part of a connected chain of apples' generations.

According to the circular and generative world image, the question "Which is the origin the parent or the child?" is meaningless. Cosmology based on GLCM is concerned with the generative succession: A child is born from his or her parents. He or she then becomes a parent, who in turn gives birth to a child. In this cosmology, attention is paid not to the beginning but to the successive process, or how the transition occurs.

(2) How is the self connected with the context? — The life cycle of the self is wrapped in the circle of the nested ecosystem.

The second important point about Figure 6 is that it shows a contextual model in which a self lives not independently but interactively, as existences wrapped in the ecosystem. The typical image of myself is represented as something wrapped in a "psychological topos", or an environment that enables personal growth. These images were drawn by many youth in my previous studies of "Self and Mother" (Yamada, 1988). The life of an apple is wrapped in a larger system of life like a tree on which it grows, and a tree is included in larger cycles such as seasonal changes. Thus, one's life is wrapped by a lot of nested life cycles interactively.

(3) What is the significance of a life? — Decline and descent should not be viewed negatively. The meanings attached to them in the life story are important.

The third view point of Figure 6 is that "my life" represents the image of decline and descent rather than ascent and progress, but this does not have negative meanings. At first glance, an apple's life may seem rather poor since it represents only a fall to the ground. However, such an interpretation is not right because "fall" and "death" are given different meanings here.

If an image "fall to the ground" was not included in the contexts as one of the six phases, or if it was not an integral part of the story, the meaning of "fall" would be different. "A story" is most important because it makes sense of one's life. I define "a story" as an "act of meaning through connecting two or more events" (Yamada, 2000). Any part of the drawing has a meaning only when it is connected with another part. The "fall" in the drawing of an apple's life cycle should be given a meaning in the context of this life story.

In the model of progress or ascent as shown in Figure 5, the self must aggressively climb up against the force of gravity. The person needs to acquire the power for climbing over obstacles, overcoming difficulties and attaining the higher position. In other words, the story often seen in the model of progress or ascent contained the idea of a "successful life." In such a success story, the key concepts are "Hope", "Will", "Purpose", "Competence", and "strength" to control the external world, as shown in the chart of Erikson.

In the life story of progress or ascent, dropping out means a setback. To make a success of one's life, one should have a strong will and should struggle against aging, disease and death. By contrast, Figure 6 has no motifs such as will, struggle, conquest or success. The drawing shows a self naturally accepting a decaying self, instead of a self resisting or trying to conquer aging and death.

(4)　What are the key concepts of life? — Emphasis on the natural cycle of transition

Figure 6 emphasizes the transition itself in the life of an apple with natural seasonal changes including its maturity and fall. The circulating seasons bring everyone to death, and death is inevitable to every creature. A fallen apple is more natural in the law of gravity than it is to struggle to attain a higher position on the tree or to get a superior competence such as "Wisdom". A fallen apple may accept one's death in the life cycle naturally and may not regard it as anything to be fought or overcome, but as something harmonious or peaceful.

Figure 6 may be interpreted according to the notion of impermanence or transition, a key concept in Buddhism. Transition refers to the idea that every thing, function, energy and power appear and disappear one after another and that the universe is not constant but continuously moving. The "Abhidharma-kosa," an important Buddhist text, teaches that the process of appearance and disappearance (birth and death) consists of four phases. The first phase is "jati," generating, the second "sthiti," staying or being at rest, the third "jara," transforming, changing or declining, and the fourth "anityata," perishing or decaying.

The above four phases correspond to the last four phases in Figure 6. This life cosmology is in

striking contrast to that of Christianity. We can see that the Christian life story is characterized by the creation of living creatures by the Creator, the active choice of the right way of one's life, and getting a permanent or immortal life by going up to Heaven at the end in view.

(5) When is the end of a self's life? — A life containing seeds does not end with one's death.

The fifth mark of Figure 6 is that "my life" does not end with "my death." In the sixth phase, the fallen apple is still staying in the earth, though it is invisible from outside. The comment explaining the drawing is "The apple becomes a nutriment for the earth." The dotted line in the drawing indicates that "myself in the earth" serves as nutrition for a subsequent life. It seems that "my fruit" of which has been returned to the earth has seeds that will realize a succession of new lives of buds that will bear fruits in the future.

When we think of the succession of life, it is interesting that the self is represented using the metaphor of a fruit. If the metaphor is a flower like Figure 1-2, it emphasizes the spring season of life, associated with love and encounters between opposite sexes. The fruit emphasizes the autumn season in relation to reproduction and generativity.

The Japanese word "mi" which stands for "fruit" has the same pronunciation and the same origin as the Japanese word "mi" meaning self and body, as I mentioned in the book entitled "Self wrapped in the Mother" (Yamada, 1988). Therefore, the use of an apple as a metaphor for the self has a deeply symbolic meaning. Furthermore, the apple represents not only the "self" but also the dual meaning of the "child" and the "parent": a symbol of maturity, fertility and generativity. An apple is a "child" of an apple tree and becomes mature to produce seeds, its own "children". An apple means both a child to the tree and a parent to the next generation.

In this circular chart of the apple life, the fall of an apple does not represent a useless death but it produces a new life of the next generation. This idea seems similar to the Christian teaching about "the grain of wheat" which multiplies by falling to the earth. However in Figure 6, the fall of the apple does not have any images of God or any ideas of "eternity" or "immortality" as seen in Christianity. In Christianity, the metaphor of an apple has various implications and is particularly famous as the fruit connected with the original sin in Eden. In Buddhism, the fruit implies a result and is also bound up with karma, or acts ruled by the law of cause and effect.

Apart from the ideas of Christianity or Buddhism, Figure 6 represents only an image of intergenerational succession of life rather than the image of either the original sin or karma. This apple story emphasizes that the cycle of life is moving constantly while one's life is transient. What transcends the limit of one's life is not the stable image of an "eternal life" but the image of "a continuous movement of the life cycle". Here, continuity of life is not equal to one's immortality.

As observed above, this apple story assumes that there remains something (the seed or the soul) that follows an individual death or there seems to be an assumptive world under the ground invisible from the outside. By the mediations of the subjunctive realities (Bruner, 1986) of narrative

imaginations, a person's life story can be connected with past and future generations' lives.

(6) What is the image of time? — Time is not linear but circular.

The sixth feature of Figure 6 is that time is regarded as a cycle. The model of progress or ascent assumes that time flows straight in one direction upwardly, while descent and regression have negative meanings. In the circular model, which represents time as a cyclic, recurrent process, even descent and regression lead to comeback or rebirth, so that the meanings between the positive and the negative are relative.

Moreover, when life is viewed on the individual level, time is irreversible and rebirth is impossible. However, when the self is viewed as a part of the story of the ecosystem or the larger cycle of life, it may be given another meaning. We can imagine a larger life cycle beyond a person's life or ego identity.

In the brief summary of GLCM, I would like tell a short story as follows. "When we think of the life of a person, it may be necessary to draw a map of his life in such a way that it starts not from his birth but from going back to the past, and concludes not with his death but extends toward the future. What a person is born into this world does not mean only his or her birth. We should see that he or she is born under the large shadow of the cycle of people which includes everyone, and even after his death, there is something in succession. (Oe, 1986)"

What can Generative Life Cycle Model contribute to life-span developmental psychology?

It seems that the linear progressive model shares the view of the Western culture during the 19th century, when modern science and industry developed. On the other hand, the circular model might reflect the natural view that was the basis for pre-modern agricultural society. The concept of circulation is connected with the concept of ecological time that perceives seasonal changes as "recurrence". At the same time it is connected with the concept of birth and rebirth as abstracted from plants that die in winter and sprout in spring.

Psychology, founded as a modern science at the end of the 19th century and developed throughout the 20th century, has long overlooked the important meanings of life, death and the soul in people's imaginary world. Read, E.S. (1997) pointed out that, "early in the 19th century, psychology was considered to be a science of the soul, but by the end of the century, psychology had more or less abandoned the soul and replaced it with the mind." We must be careful in any attempt to recover the soul as an entity, but it may be useful to understand "the concept of soul" by the narrative and imaginary mode. The image of soul is still alive and influential to people's lives nowadays and it seems to be connected with the concepts of the ancestors, future generations and the cycles of birth-death-rebirth (Yamada & Kato, 2001).

Nowadays, as we live in a highly technological society surrounded by many ecological problems, we need to develop the concepts of generativity for the survival of our future generations. In

addition, we need not revival the cycle-recycle cosmology nostalgically but to take it account into new perspectives in both ecological and psychological worlds.

It is my view that the generative life cycle model (GLCM) seems to complete the concept of generativity by means of the cycle cosmology, and to add generativity to the assumed images of the successions of generations after one's death. We can share the generative life stories beyond the individual's life and death, only through people's imaginations and narratives that connect with far generations in the past and future.

I emphasize especially that GLCM can combine the view based in Western culture with that based in East Asia. Though I have discussed GLCM constructed based on Japanese culture, this kind of image seems to be observed in traditional societies around the world. Among Christian examples of the circular life image we may cite the following: the teaching that the death of a grain of wheat produces many grains, and the glory of the resurrection at Easter. Easter is associated with the renewal of nature during spring and the Easter egg is symbolic of rebirth. Searching for the common knowledge across the different cultures, we will be able to develop a new perspective of life-span developmental psychology. GLCM may contribute a new view of human development, regarding the following points:

(1) Multiple perspectives of time

Our time perspective can be multiple if we adopt a concept of retrogressive time from death to birth, in addition to the progressive time from birth to death. In our daily lives, we perceive time as progressive, physical and irreversible while we rely on the retrogressive or circular time in our recollections and memories. These memories encourage people to recover and survive from loss. In the circular perspective, the meaning of aging may change. Aging does not mean a reduction of future time but a collection of past time. The coexistence of multiple time axes is especially seen in narratives and life stories that help people to organize their experiences and to make sense of their lives. For example, subjunctive realities in narratives can construct new perspectives in past and/or present lives and change future realities. Traditionally, former generations have taught future generations through stories of their lives. Nowadays, we are too busy to update new information and technology quickly in the short term. We have forgotten the long recurrent time perspective and have decreased the wisdom of relating our histories with our future.

(2) From the life cycle of an individual to people's lives within the generative life cycle

A conceptual shift from individualism and egocentrism to a way of thinking centered on the generative life cycle will lead to respect for successions of generative people's lives on earth.

(3) The Significance of assumed worlds, images, and generative stories of lives

Traditionally, psychology has dealt with behaviors or actions visible from the outside. However, the introduction of an assumed world or story gives some image to invisible things such as rhizomes

"under the ground" in winter or seeds which sprout only after the lapse of a certain time. These stories are important to organize and make sense of human experiences. The Japanese word "musubu" which means "combine", "connect", "link" and "join", also means "bear", "produce" and "generate" in origin. If we connect two events by narrative imaginations, the new meaning is generated.

The life story approach encourages us to expand our perspective of time over the limitations of our lives and to maintain the attitude of making efforts with patience for a long time. This approach leads to expand the concept of generativity in which the will of the dead is inherited by the people of the next generation, who live with gifts from the dead.

(4) Generative redefinition of old age and death

Old people should not be treated as the useless and weak who are close to death. According to the new meaning of death, they should be treated as valuable existences in their own right, as well as for children and young members of society, since they pass on gifts such as "seeds" and "rhizomes" to the following generations.

I suggest combining the progressive model with the circular model, without giving up the former, in order to develop a multiple time perspective. For example, it is possible that the progressive model could be used in the first half of the life of an individual and the circular model in the latter half. We also may have both models at the sametime: the progressive time in our actions and the retrogressive or circular one in our recollections or memories.

We should pay attention to the function of stories based on images of generative circulation or rebirth rather than question whether the image is true or not. Death is given a symbolic value through keepsakes, wills, last words and so on. They communicate messages from dying persons to those who are left. Rebirth stories are thought to encourage dying persons to care for future generations yet unborn and younger people to care for ancestors they have never seen, thus bridging the gap between generations.

Even now, when they see a newborn baby, people often say things like, "This baby looks like her dead granny. She may be a reincarnation of the grandmother." Naming also makes stories. For example some people call a baby's name after their ancestors. Successions of Kabuki actors' stage names have the function of telling and retelling their own generative stories to younger generations.

One of the roles of old people has always been to tell children tales from long ago. Why do most Japanese folklore stories begin in this way: "Long, long ago, there lived an old man and an old woman"? In my opinion this is because old people have a wealth of time and stories. Old people are resourceful and have the wisdom that comes with maturity to tell life stories and histories vividly and realistically.

According to the generative life cycle model (GLCM), aging means growing closer to infancy. This is not a superficial view that old people revert to be childish. It has deep implications, that those

who are going to die share life stories with those who have just started their lives by mediating the generative imaginations and narratives. Thus these stories bear significance as they serve as a medium for connecting past generations and new generations cyclically. We will be able to enrich our view of life-span development by looking at individual life cycles, not as closed and isolated, but in a broader perspective of the generative cycles of lives.

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