Japan's School Architecture as Mixture between the West and the East*

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INTRODUCTION

The purpose of this paper is to consider how education in Japan made its transition since its contact with the West through spatial dimensionality of education, specifically focusing on the dimension of school architecture. School architecture is a valuable object to visually observe modernization in the field of education. Architecture and the things that construct it involves the key to analyze 'cultural unconsciousness' (Taki, 1984). For this reason, architecture seems to provide the effectiveness when discussing the progression of modernization process in between consciousness and unconsciousness. This is why school architecture is being examined in this paper.

As a theoretical base, the analysis of the modern 'space' of schools that was developed by the pedagogy researchers influenced by Michel Foucault's theory of disciplinary practice first needs to be taken into account. (Foucault, 1977; Gstettner, 1981; Bendele, 1984; Kost, 1983). They found the fundamental spatial characteristics of modern schools in its 'closed nature'. They centered around the discussion on how this 'closed nature' historically emerged and what structure supports it. In addition, the modern era structure of how subordination to authority became possible due to spatial requirements was critically considered. The subject in consideration of such circumstance was school architecture in the West. However, the fundamental perspective and method of the speculation can be incorporated with the non-Western countries that adopted westernization, including Japan.

I have already made an attempt to speculate the characteristics of school architecture in Japan based on the disciplinary practice theory (Yamana, 2003). In this paper, the characteristics of school architecture in Japan will be apprehended from the perspective of disciplinary practice theory. On that basis, I will point out the problem of the interpretation of the 'space' of schools from the perspective of disciplinary practice theory often resulting in two-sidedness, 'closed nature/openness'. In the final analysis, the shift of theoretical base from disciplinary practice theory to system theory will be proposed as an effective measure to resolve such problem in the process of interpretation.

FROM TRADITIONAL SCHOOL BUILDINGS TO WESTERN SCHOOL ARCHITECTURE

Typical schools for the common people in the Edo Period (1600-1868) in Japan were such facilities called *tenarai-juku* or *terakoya*. In these facilities, children had the

opportunity to learn the so called minimum essentials such as 'reading' 'writing' 'calculating' (Ishikawa, 1978; Ishiyama, 2003; Tsujimoto, 1999). These forms of schools may seem rather strange for those who regard modern schools of the Western perspective to be normal and obvious. For example, if you take a look at the children in *tenarai-juku* depicted in the Japanese traditional block print art called *ukiyoe* (cf. Kumon, 2000, p. 168), the lack of order and discipline of their behaviour can be noticed immediately. In the *ukiyoe*, one will find low desks called *tenjin-zukue* being placed disorderly. In this *tenarai-juku* school, the individual place of a teacher is not being effectively located in order to supervise. Therefore, the children in the iconography are given space to act mischievous and to horseplay in this learning room. Children seem to be relaxed and released from sense of tension. These images, although quite different in time and space, reminds us of Pieter Brueghel's 'Ass At School' (1556) or the painting that depicts the lack of order in the school that occurred along the development of systematization in Europe from the 17th to the 18th century (Schiffler & Winkeler, 1994, pp. 77 and 121).

As it was aforementioned, the Meiji Restoration triggered the shift of existing learning space that is depicted in the caricatured *ukiyoe,* and transformed it into modern schools. As it is well known, the Meiji Restoration brought an end to Japan's long closed state that had been maintained throughout the Edo Period, and it began to take the path of modernization from there on. The westernization of Japanese culture that was implemented by the Japanese government was considered a part of the important strategy to catch up with the Western countries. There on, Japan experiences, as the West did, the differentiation of function of the social system in all levels. With that came achievements related to the people's lives in general, as well as on the other hand, came not only loss, but also burden. The discussion of what Japan achieved due to modernization (westernization), and its loss from it, will be discussed later, focusing on the level of the 'space' of schools.

THE STANDARD FORMATION OF SCHOOL ARCHITECTURE IN JAPAN

Western schools that are the mechanism of education, gradually permeated throughout the Japanese society from the 1870's to the 1900's. Standards of school architecture were gradually established, and therefore, similar school architectures were seen throughout Japan. Many schools were generally built of one floor wooden building. The average size of a classroom was approximately 66 m^2 and located at the south side of the building. On the north side, hallways were located alongside the classrooms. Each classroom was built to accommodate 80 students (Kanno & Sato, 1983a).

The spread of this standard school architecture signifies the structure formation of 'visibility' into Japan's educational space. The 'visibility' structure mentioned here, especially based on the perspectives of disciplinary theorists who were influenced by Michel Foucault, is the architectural characteristics that have appeared in various buildings along with the process of modernization.[1] In school architecture, particularly speaking about classroom space, the 'visibility' structure is formed by the setting of desks and chairs. Such formation provides the 'visibility' of the teacher to see each child/student, and for all children/students to see their teachers. What was emphasized when interpreting Western school architecture based on disciplinary

theory was that under the condition of setting such visual structure, did it bring order and discipline to the space of education (cf. Kost, 1983; Rutschky, 1977).

The precondition of the order regulation function was gradually prepared, along with the daily practice of sitting on chairs at school, as the obscurity of the traditional custom of sitting on the floor became present. In other words, chairs and desks formed what Michel Foucault called 'grid structure', a mechanism that segregates and depose the children that moves about the classroom as an 'odd' existence. Also, at the same time, with regards to the 'visible' structure of the classroom space, similar to other public domain where chairs were implemented, the hierarchical human relationship fundamentally became visualized.

With the 'import' of such western 'space' of schools, along came the coding of body movements in classrooms that later in Japan, was further elaborated. In Meiji era, several handbooks were issued for the teachers, in which the standard body movement from the moment they enter the classroom, and throughout the class, and until they exit the room, are described (cf. Mori, 1993, p. 86; Sato, 2005, pp. 26-28). Moreover, the bodily movement techniques utilizing the spaces between classroom desks and chairs were also introduced. Teachers supervising the children/students as they move about in between the desks, a method called *kikan-junshi*, and an exercise called *kikan-taisou* held by using the spaces in between the desks, are some actual examples performed during the Meiji Era.

JAPANESE ELEMENTS AND ITS ORDERED FUNCTION IN MODERN SCHOOLS

This was an overview of the traditional school systems that were lost in Japan and were replaced by Western schools after the Meiji Era. However, it needs to be mentioned that schools from the West were not simply copied and introduced into the school systems in Japan. When compared to schools built in Japan with the West, there are several points that are clearly recognized as Japanese elements. The process of Western schools being accepted as a fundamental form of modern 'space' of schools, from a different perspective, can be seen as a process of Japanese elements transforming the Western school architecture model from the inside.

If we look back from the starting point of this examination of structure and order of modern 'space' of schools, several important points regarding the Japanese elements that are found in Japanese schools but not in the Western schools, surpassing the superficial layer of architecture can be mentioned. Although in the previous section, the characteristics of western schools that was adopted into Japan was perceived through focusing on the function of formation and ordering of 'visibility' structure, it cannot be presumed that such structure and function has been eased due to the mixture of Japanese elements. Rather, it is acknowledged that the function of discipline and order has been strengthened in ways that cannot be found in the West. Below, I would like to refer to three elements based on the results of previous studies.

The first example to make note is the *shoko-guchi*. *Shoko-guchi* is a place specially arranged to change one's shoes from outdoor shoes to indoor shoes or vice versa. In Japan, there is a traditional custom to remove one's outdoor shoes once you step inside a building to maintain the cleanliness of a house. *Shoko-guchi* is a space created to apply such custom to school architecture. By looking at the floor plan of various schools at the time, *shoko-guchi* was not to merely serve the purpose of

separating indoor and outdoor. For example, in many schools, *shoko-guchi* for teachers and visitors were located at the central part of the building, but it was located at the side of the building for children/students. In some schools, it was differentiated depending on the gender. As you can see, *shoko-guchi* was a space that often separated the status and gender. The *shoko-guchi* itself, reflected the space of dividing teachers and students, and male and female. The repetition of such physical movement on a daily basis, children/students self-evidently accepted these separations.

The second Japanese element in regards to the modern 'space' of schools is the *hoanden*. *Hoanden* is a space fixed inside the school, in which a photo of the Imperial Couple (*goei*) as well as *kyoiku-chokugo,* The Imperial Rescript on Education was established. On important occasion of celebration such as *shidaisetsu*, teachers and children/students would make a profound bow to the portrait kept inside the *hoanden*, and *kyoiku-chokugo* was read out loud. One was expected to straighten their clothing and to take a deep bow in front of a *hoanden* on daily occasions. These spaces strongly connected to the Imperial System, was usually created at the central part of the school building, in the hall near the main entrance, or near the faculty's office (Aoki, 1988, pp. 52-53). It can be said that the hierarchical relation between teachers and children/students was, for a long period of time, in a double sense, spatially in hierarchy due to the Imperial System.

The third element is the sports ground that was established inside the school premise. The Japanese characteristics that are found from the latter half of Meiji era, is that each school generally possesses a comparatively large sports ground. Several reasons are provided from previous researchers. One reason is due to the increase in school enrollment rate in the latter half of Meiji era. Larger space was necessary to hold Sports Day. Until then, several schools held a joint sports day; however, from around this period of time, each school began to hold their individual sports day. Therefore, many schools moved in search of securing larger premises to build larger sports grounds. Another reason noticed is also related to sports. When establishing sports grounds at schools, it was required to secure a size that was enough to play baseball, an extremely popular sports at the time. Since then, to locate a large sports ground in the center of the school premises was generalized (Aoki, 1988, p. 54). According to Shunya Yoshimi, a sociologist in Japan, sports day was on the one hand, required from the top (the government side) for its political intention to cultivate the physical strength of its own people, but on the other hand, was supported and approved from the bottom (the people's side) due to the festival-loving trend and nature of the Japanese people. As a result, it functioned as an activity to form a part of discplinary system (Yoshimi, 1992).

STRATEGIES OF SPATIAL OPENNESS

Up to now, we have viewed the characteristics of Japanese school architecture under Western influence, from the viewpoint of school architecture theory based on disciplinary practice theory. We have seen the formation of the 'visibility' structure and the strengthening of the closed nature of space in the process of introducing Western standard of the 'space' of schools into those of Japan. In this process, undoubtedly Japanese elements were added to the process of forming the 'space' of schools, rather than Western elements merely being copied. However, the act of

adding Japanese elements and variations did not function as a break in the tendency of forming a closed nature in the 'space' of schools, but rather, played a role in strengthening the closed nature in various ways.

What is still missing in explanations of Japanese school architecture is the reference to genealogy in the attempt to bring openness to the 'space' of schools. When looking at Japanese educational history, two main waves can be seen in the strategy for bringing spatial openness. One is in the beginning of the twentieth century when new education came out, and another is in the second half of the twentieth century when open schools became popular. If we use the keywords of the second half of the twentieth century, the characteristics of the innovative school architecture can be explained as being more 'flexible' and 'multipurposed'. In its relation to the West, it should be reinforced that in Japan, while Japanese elements were partially kept in the strategy for opening spaces, the fundamental influence came from the West where the strategy was originally born.

The trend to new education in Japan was seen in the Taisho Period (1912-1926) when movements for democracy became popular. This was a time when the reality of rigid school education systems was reflected upon, and various theoretical as well as practical experiments were carried out in search for a new educational method that followed the 'real nature' of children. In terms of space, with the trend of recognizing importance in children's experience and creativity, special classrooms were made for subjects such as science, drawing, singing, and housekeeping manners.

When we look at examples of schools which were in favor of reformation, one would notice various experiments in the creation of space. For instance, in *Tamagawa-Gakuen* (established in 1929), the *shoko-guchi*, which served as the school's entrance and exit as mentioned above, was placed at each classrooms, easing the obvious division between the inside space and outside space. In addition to this, strategies such as using more than one blackboard in a classroom in order to weaken the teacher-centered 'visibility' structure and to create a space where children can be the main characters of activities were experimented. Furthermore, within the implementation of new education, new attempts were made to create special rooms for children to study on their own (*jishu-shitsu*), where various teaching materials were gathered. These materials were originally divided into different rooms according to subjects. This attempt in bringing teaching materials of different subjects together in one classroom was made in order to systematically bridge one subject to another, as classes were clearly divided according to subjects. Another typical example that can be seen from a boarding school called *Jiyu-Gakuen,* built in the beginning of twentieth century, is the employment of natural environment such as small woods, streams and farms within the school site, hence connecting the outer space to the inner space of the building.

Another wave in opening the 'space' of schools in Japan emerged in the late 1970s. School architecture reformation which originated in the 1960s at Lowe Primary School (established in London in 1965) in the UK influenced other countries in Europe as well as in the US, hence creating a trend to functionalize the 'space' of the school. Subsequently, such reformation of school architecture in the West was frequently introduced in Japan. Influenced by this, the trend to reflect on the rigid 'class-based unanimous progress and standardized lessons in closed classrooms' (Ueno, 2008, p. 22) increased, resulting in the birth of the so-called 'open school' movement in the late 1970s to 1980s.

The movement in 'opening' the 'space' of schools was also supported by the educational administration. The most important fact is that the Temporary

Educational Council, launched in 1984 in order to search the right direction of educational reform, announced the 'principle of emphasizing personality' and the importance of shifting the weight of education system into lifelong learning. Innovation of the 'space' of schools can also be understood as a correspondence to such movements of educational reform. In terms of practical institutions of the 'space' of schools, 'multipurpose space support system' was established in 1984, encouraging the 'space' of the school to be more 'elastic and multipurposed'. This was the time when flexibility of space functions was considered important, and computer classrooms were introduced in order for the children to adapt to the information society. Attempts to enrich the outer space of schools were also made, and facilities such as 'outdoor stages' and 'nature experience fields' were included in the list of subsidies as well as being actually built. Moreover, schools were considered to function as an open space for the community, thus resulting in government subsidies in creating clubhouses. Such efforts can be understood as a few of the attempts in connecting the inner space of schools to the outer space.

A large amount of fund is necessary in innovating the 'space' of the school. Therefore, the degree of innovation largely depends on the financial situation. In current Japan with its weakened economy we cannot see such active trends to open the 'spaces' in school compared to the time up to 1990s. However, the notion of placing importance on the strategy of opening the 'space' of schools in the process of school architecture reform has not changed till now.

VARIATION OF INTERPRETATION ON MODERNIZATION OF SPACE

History of School Architecture as Modernization and Resistance to it

Theories on the 'space' of schools from a disciplinary practice theory's point of view interpret modern schools as a tool of oppression. Whether this understanding is correct depends on time and context. In Japan, theories of the 'space' of schools from a disciplinary practice theory's viewpoint were considered realistic until the time when issues like school violence and bullying became serious problems (from the 1980s till the first half of the 1990s). However, after the 2000s, limitations of disciplinary practice theory were pointed out as not being able to suggest positive sides of school education, and instead, going beyond such limitations became a new challenge. Overcoming the limitation of disciplinary space theory, how can we understand the dynamism of the 'space' of schools, especially those between 'closed nature' and 'openness'?

At present, we can admit two main positions in interpreting such dynamisms of the 'space' of schools. One is a position in which we comprehend history of school architecture as a process of modernization (= closed nature) and the protest against it (= openness). Another standpoint is to understand history of school architecture as a process of 'compensation' (between closed nature and openness) to modernization. As explained below, the difference between the two positions not only relates deeply to the assessment of school architecture, but also to the understanding of modernization of education itself.

A typical example of the first position in which one understands the history of school architecture as a process of modernization and the protest against it would be

for instance, Toshiaki Miyazaki's statement on 'open school' style architecture. Miyazaki first explains the trend to 'open' school architecture since the 1980s, and names such schools as 'postmodern school architecture'. He states that 'schools should not be barracks, nor should they be prisons, as Foucault explains. If a modern school is a system of hierarchy of discipline in various ways, 'postmodernity' obviously implies ressentiment against such systems. In order for postmodernity to be practically meaningful in school architecture, it has to open the unified and closed "space" of schools' (Miyazaki, 1994, p. 26). Miyazaki clearly sees the possibility of postmodernity solving the problem of closed nature of modern 'space' of schools, for the reason that it is not obsessed with modernity. For him, postmodernity is located outside modernity, and outside the range of Foucault's disciplinary practice theory.

The interpretation of school architecture as a process of modernization and the protest against it has common grounds to those calling for a return to non-Western tradition before being influenced by the West. It seems that today, voices calling for a return to tradition in the field of education has increased. A typical example of such viewpoints on school architecture can be seen from a quote of the director of a museum which held an exhibition called 'Children of *Ukiyoe* (pictures of the Edo period)'. He states that the school system of Meiji era imported Western systems by denying the old Japanese educational system. Now our current system is facing crisis, thus we are in a time when we need to reassess our old traditional educational system (cp. Kumon Kodomo Kenkyujo, 2000). At first glance, this viewpoint which mythologizes tradition seems to stand against the position of heroicizing postmodernity. On the contrary, however, it is similar to the standpoint of postmodernity, in which it has the mentality of seeking solutions in assuming the influence of elements outside the reach of modernity.

There are elements other than 'postmodernity' and 'tradition' outside the reach of modernity, such as 'nature', 'indigenous', 'livelihood', 'community', 'home', and 'living world', which were named differently according to its context. Such confronting structure is common to many educational studies on the 'space' of schools and its impact on character formation. This can also be said to the structure of this article, in which I am giving supplementary explanation of the strategy of 'openness' of the 'space' of schools after discussing the 'closed nature' of the 'space' of schools on a disciplinary practice theory basis. Studies on disciplinary space theories often result in such confronting compositions.

History of School Architecture as a Process of 'Compensation' to Modernization

The other standpoint in understanding history of school architecture is to see it as 'compensation' (between closed nature and openness) to modernization. While this standpoint is yet to be established theoretically—at least in terms of school architecture—it seems that it still contains the possibility as an alternative to the understanding of school architecture history as a resistance to modernization. System theorist Norbert Bolz talks about modernization as 'compensation', which can be a basis of a theoretical explanation of this interpretation. While looking at the outline of his theory, now we will examine how history of school architecture can be interpreted from his point of view.

Bolz talks about modernization as 'compensation' in his criticism against 'cultural criticism'. As we do not have the space to examine his theory in details here, we will focus on three of his points which are worth considering in relation to the history of school architecture.

Firstly, Bolz claims that culture serves as a 'compensation for where people cannot stay as nature' (Bolz, 1997, p. 215). He states that culture, on one hand, 'firstly is a mechanism to protect people from people—something to tame people, as we are (in our interiors) just like wolves in nature', and on the other hand, is a mechanism to 'protect people from (external) nature which people cannot accommodate' (*ibid.*). Culture, namely, has a 'protective function'.

Secondly, Bolz asserts that culture 'compensates the loss of aura with self criticism' (Bolz, 1997, p. 216). Culture serves as a protection to people, and for this reason, it 'removes fear but instead, does not bring us surprises' (*ibid.*). He then talks about cultural criticism, in which he brings controversial opposing concepts focused on the instability of the modern world such as 'real/pure/self-realization/return to nature/essential' (*ibid.*), calling for the 'simple and authentic illusion of the opposite world' (*ibid.*), thus compensating for the lost aura.

Thirdly, it is necessary to make a second order observation of culture, instead of merely being immersed in the 'compensative' situation of culture. This enables us to understand culture through the concept 're-entry', Bolz claims. Culture takes in the binomial relationship of culture and those that differ from culture. Those that differ from culture include 'nature' and 'essential'. According to this theory, 'nature' does not merely lie at the opposite end from culture. Rather, in the process of modernization, a paradox can be seen in which 'cultural system repeats the distinction of itself and of its environment, and through this 'nature' is born' (Bolz, 1997, p. 223). His view is concentrated in his words 'nature is a cultural antithesis to culture' (*ibid.*). Finally, he concludes that 'cultural eyes destroy simplicity, resulting in the high evaluation of culture as compensation to it' (*ibid.*).

Utilizing the above theoretical overview and replacing culture to school architecture, images of school architecture can be explained as below. Firstly, school architecture is a kind of a modern construction of culture which serves as a 'compensation for where people cannot stay as nature', a space which has a 'protective function' for the children who are accommodated. Secondly, criticisms against school architecture are made in order to 'compensate the loss of aura with self criticism'. By using keywords such as 'nature' 'real' 'pure'—or even 'indigenous', 'community', 'home', and 'living world'—an ideal learning environment lost in modern school architecture is recalled as a 'simple and authentic illusion of the opposite world', which becomes a basis of reform. Thirdly, such reforms must be understood as the re-entry of second order observation. School architecture as a modern system is distinguished from its exteriors, and this distinction is re-entered within the system. Possible exteriors of school architecture as a modern system are 'nature' and 'real' which are 'cultural antithesis of culture', or 'openness' and 'harmony' which are considered as their characteristics. As a result, more progress can be seen in the development and specialization of systems.

Disciplinary Practice Theory and System Theory

Shall we consider the history of school architecture as modernization and resistance? Or, shall we understand it as a process of 'compensation' to modernization? Many 'spaces' of schools, particularly those of reformative schools allow both interpretations. This can be applied to the Westernization of the 'space' of schools in a non-Western environment, as focused in this paper. For observers who distance themselves from the subject of their studies, it is important to differentiate the two standpoints by considering the first as a first order observation and the second as a second order observation.

An oppositional interpretation is seemingly useful in explaining the logic of justifying innovation by the party involved—whether it is new education or open school. However, oppositional interpretation is not enough in explaining the process of innovation that actually takes place within the logic of such justification. In oppositional interpretation, the binomial relation of 'closed nature' and 'openness' tends to be considered in connection with other binomial figures—heteronomy vs autonomy, oppression vs liberation, adult-centered vs child-centered, object vs subject, center vs periphery, artificial vs natural, and system vs living world. As a result of such interpretation, nothing more is brought than an image of competition of two elements lying as the complete opposite to each other. Thus, the structure of oppositional interpretation itself becomes the primary factor of creating a blocked situation of the issue.

Bolz's arguments based on system theory in which he talks about modernization by adopting his 'compensation' theory becomes useful when we consider the problems of the above structures. If we understand the foundation of modern 'spaces' of schools as the 'closed nature' of it, the strategy in 'opening' this would be nothing else but to loosen or to remove a part of it. In such cases, schools are faced to new risks related to order and discipline that used to be maintained for its 'closed' structure, stressing other dimensions in strengthening such order and discipline. But only because of this, forms to 'compensate' it can be developed.

For instance, the 'space' of the school with natural environments releases children to forests and fields, risking to abandon the 'visibility' which enabled the school to observe and protect children. However, it has been reported that larger sites including natural environments contain wider 'visible' structures in such schools (cf. Yamana, 1996). This can be understood as an example of 'compensating' the deliberate defect of spatial structure with a new spatial strategy. Also it must be noted that reformative schools that regard natural environments as important tend to place importance on 'autonomy' of pupils and physical training such as gymnastics. This can be interpreted as an example of 'contemplating' the spatial risk related to order with other elements.

This advantage of system theory which accepts the theory of 'compensation' has long been neglected. The 'compensation' theory, as it has been well known, has been labeled as a conservative theory by Jürgen Habermas who is known for his critical theory. Nevertheless, when we take a distance from these criticisms for now and get closer to system theory from a 'compensation' theory point of view, we can see a diverse instead of a homogeneous modernity.

Through the examination of how a non-Western society changed with its encounter with the West, we have seen the tree-diagram of modernization. Forms of modernization in non-Western societies differ from each other according to the timing when it came into contact with the West, its cultural situation that existed before, and

logic of rejection and reception that emerged due to the encounter. This means that when we analyze the history of non-Western societies, a variety of 'compensation' processes and patterns can be found. This can be applied to theories of the 'space' of schools. Of course, the examples we see in the tree-diagram of the 'space' of schools is not always positive. However, it should be worth considering that this study contains some hints for innovating space structure that are yet to be discovered in the process of globalization.

NOTES

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1   Disciplinary practice theory involves the hypothesis related to the role of 'visibility' of modern education facilities. According to Gstettner, 'the concentration of disordered individuals, is always, a potential source of danger' for disciplinary practice (Gstettner, 1981, p. 28). Therefore, to allocate a particular place for each individuals, disciplinary practice pursue the structuralization of space (*ibid.*). 'To prevent the various lack of visibility', the 'space' of school needs order in the sense where Michel Foucault mentions the 'grid structure' (pp. 49-50).
2   For instance, *Kishiei Tezuka*, one of the most typical pro-new education educators, tried to utilize supplementary blackboards such as 'free study boards (*jiyu-gakusyu-ban*)' and 'children's presentation boards (*jido-happyo-ban*)' in hastening children's free learning and expressions (Ishizuki, 1991, p. 99).
3   Here again, one of the important pioneers of such reformation would be *Tezuka* (Ishizuki, 1991, p. 93).

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