



Collaborative Work of Different Design Disciplines in a Design Project: Söğütlüçeşme “Hub” Project

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ABSTRACT

Interdisciplinary is becoming the main part of knowledge production in universities as it is in professional life. Due to the multi-faceted character of design regarding to its concern with various fields such as economics, marketing, psychology, sociology, interdisciplinary studies play a very important role during the design process. Beside those fields product design by its own correlate with many other design fields, such as interior architecture, graphic design and so on.

In this paper, the “HUB project”, which is the collaborative work of undergraduate students of Interior Architecture and Industrial Product Design programs, will be presented. The aim of the project was solving the environmental and social problems around a transportation area. To achieve this goal, project groups submitted design solutions and projects in accordance with the interviews, photoshoots, surveys. In this paper, the findings of that research, design solutions of the groups and the outcomes of collaborative work will be evaluated in the context of student works and the collaboration of two graduate programs in the same faculty.

Keywords: collaboration, group work, product design, interior architecture

INTRODUCTION

Bormann and Henquinet (2000) define group work as “an assignment of two or more people interacting with each other and interdependently working together to achieve specific objectives” (Bormann, Henquinet, 2000, pp 56). Group work is regarded as an



improving learning system due to its character that allows students to negotiate and manage their design concepts with other group members. It is also a great opportunity for individuals to find solutions to the complicated problems in collaborative works. Therefore, since for a long time, universities have been organizing workshops and arranging group works to gain students new point of views and prepare them for the business life before graduation. Especially, in complex cases, individuals from many different disciplines have to participate (Trist, 1983). According to Kim, Ju and Lee (2015) "collaborative learning in a joint studio situation supplemented students' expertise, re-orienting approaches to design and opening up a holistic approach to the design issues of affordability, sustainability and community. Overall, the practical learning in the joint studio project validated the importance of exploring alternative solutions based on varied levels of information, and input of those from different educational and cultural backgrounds" (Kim et al., 2015, pp 102). Considering those understandings, in 2012, a collaborative work was conducted at X University, Faculty of Fine Arts and Design, by the participation of the students of two departments that attended the courses in their own undergraduate program.

Urban Furniture Design course is one of the departmental elective courses of Department of Industrial Product Design. The course is 5 ECTS, 4 hours in each week and every fall semester approximately 10 students enroll the course. In this course students are expected to submit urban furniture design projects for a public space. At first week, a design brief is given to the students which includes the location of space, the definition of users and visitors of the space, basic requirements of an urban furniture and finally the requirements of the design project such as what the students will submit at the end of the project and how will be the evaluation criteria of the project. The following week students are expected to visit the location and make survey, observation and interviews with the users of the space and then present the findings of their research. Students were free for choosing their users, such as designing urban furniture for the bikers of that space, students or the mothers and children.

Project III course is one of the compulsory courses of Department of Interior Architecture. The course is 12 ECTS, 6 hours in each week and every fall semester approximately 10 students enroll the course. That course is prerequisite and students have to be succeeded from the previous Project course. For the 1st Project; the course covers spatial analysis, design and projection techniques, the culture of architecture, the techniques of analysis and presentation. The aim of the course is making the students gain the skills of observing the environment and contemplating. It provides an overall introduction to building systems and provides opportunities for practicing with design in



the preliminary sense and studies on presentation and expression. In the 3rd Project students work on completed or old constructions and try to give them new function.

The "HUB" project was an inter-departmental study that aimed to establish a transit route and a public space for the region at the intersection point of the Metro bus stop, train station and the bus stops.

While designing this transit route and the public space, the climate of the selected region, structure, industrial and cultural heritage and other environmental conditions were taken into consideration; and the needs for the pedestrian walk, park, jogging track, children's playground and resting places were taken into consideration.

The aims of the "HUB" project were;

- to give students the ability to work with students from different departments,
- to give the students the ability to work in groups,
- to provide students the opportunity to see different approaches to the same subject from different disciplines,
- to gain the students the ability to critique each other's projects within the framework of respect,
- to gain the students the ability to identify the users of the place and needs of the users
- and finally, to add value to an idle place.

Within the framework of the aims, the students that study in Industrial Product Design work on urban furniture design, such as;

- resting units, communication boards, trash cans, lighting, and so on,
- kiosks for ticket, tourist information, newspapers, magazines, food and beverage and so on.

In addition, the students of Department of Interior Architecture work on circulation solutions of the transit route, such as;

- periodical exhibition and trade fair areas,
- eating - drinking area and interior design,

As a result, students from 2 different undergraduate programs analyzed the surrounding of the intersection point of the Metro bus stop, train station and the bus stops, and then developed new projects for that space.



"HUB" PROJECT AND THE FORMATION OF GROUPS

"HUB" project began on 2012 Fall Semester and in an academic semester of 14 weeks this project was conducted once a week, totaling 4 hours each week. Three academic staff provided feedback to the students. Urban Furniture Design course had a lecturer that was also the project supervisor and Project course had a lecturer and a research assistant who were also the supervisors of the projects. In the HUB project, 7 groups, each consisted of two students, worked collaboratively on their concept project. Tutors worked in teams of three and supervised up to 7 project groups. The tutors' roles were checking on progress and advising on design.

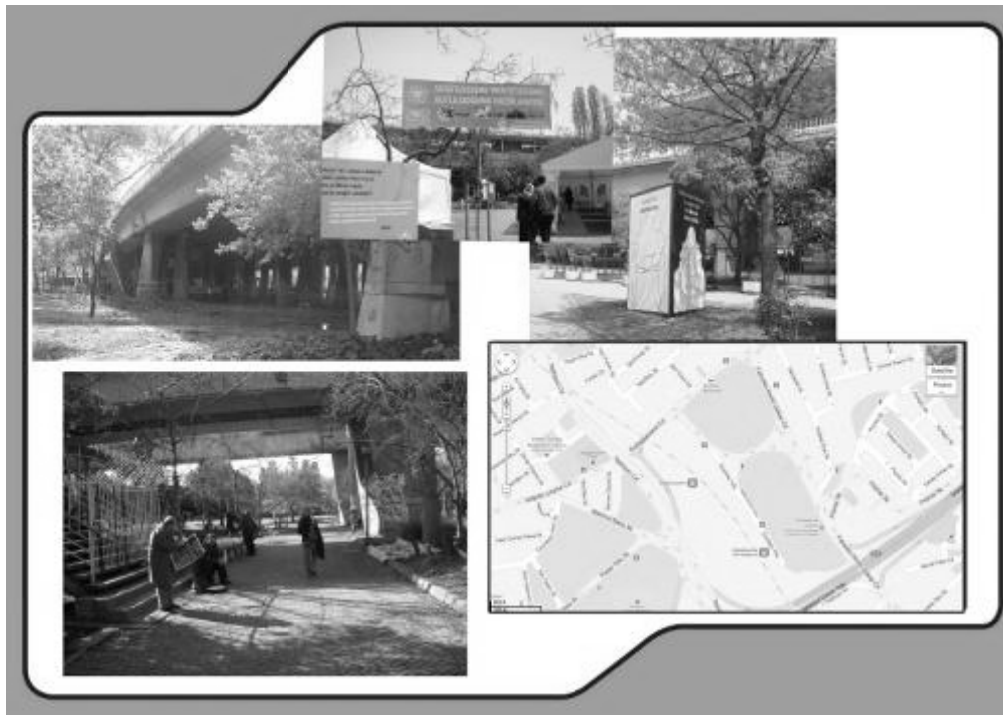
At the pre-design stage (weeks 1-3) the design brief was given to the class, the students were taken to the project place and left alone for taking photos and talking with the sellers, visitors and users of the place. The following week students came with presentations and design ideas for the space. While results of the findings were presented by the students of 2 departments, all class members listened each other's ideas and at the end of the presentation students were set free for choosing their partners who had similar design approaches to the project. The students of two different departments met with each other and began to share each other's ideas. During the schematic design stage (weeks 4-9) problem solutions, design ideas were developed by groups. The participating academic staff members gave weekly comments to the students. Students used sketching techniques which was very in solving problems, to share their design problem solutions. According to the view of Cross (2006) about sketching; the design problem is itself ill-structured, and design sketches assist problem structuring through solution attempts. Due to the characteristic of sketching that enables exploration of the problem space and the solution space to proceed together, assisting the designer to converge on a matching problem-solution pair. It enables exploration of constraints and requirements, in terms of both the limits and the possibilities of the problem and solution spaces (Cross, 2006, p. 37).

For the design development stage (weeks 10-14) group members worked on their design tasks and submitted a design project about their subject. The design process was observed by the participating academic staff members and at the end of the project each course lecturer evaluated the works of the students that enrolled his/her course.

DIFFERENT DESIGN APPROACHES OF GROUPS

In "HUB" project, 7 groups -those included 14 students from each undergraduate program- worked on different design concepts. At the pre-design stage the bad conditioned transit route that was used by large number of various people all day was

presented to the students. That transit route is at the intersection point of the Metro bus stop, train station and the bus stops. The rail road is on the bridge and the walking path to the bus stops and Metro bus stop is under that bridge. Especially the place that located under the bridge is generally dark and perceived as unsafe by the user of the place. The task that presented to the students was to develop an indoor public space to that region and design urban furniture that would be used in that public space. In order to satisfy prerequisite conditions, the students from both disciplines were challenged to use the plan of the region and to think about the underside of the bridge. Due to the physical restrictions, the design concepts were limited and that prevented the creative thinking of the students, but beside that challenge it was a good opportunity for students to have an idea about the problems they would face in real life.



Picture 1: Surroundings of the metro bus station

During nine weeks, the group members began to work on project only in course hours and didn't meet with each other for the project on other days. Consequently, the groups were dispersed and the group members worked individually on their fields regarding to their group's design concept. Although the design project did not go on as a group study for the last 4 weeks, the group members stayed loyal to the initial design concept. Briefly, the initial design concepts of the groups were as follows:

Group A

This team tried to solve the problem of the location during the days of football match. During those days the supporters of the team, who live on the other side of the city, use Metro bus and the location between stadium and Metro bus station could be very crowded on those days. That group thought about a container with an accordion shape which would help to adjust the direction of the container. During the match days, this container –which had an entrance at Metro bus station and an exit to bus stops, would change direction and its exit would be directed to the Stadium side.



Picture 2: Urban Furniture Design of Group A

Group B

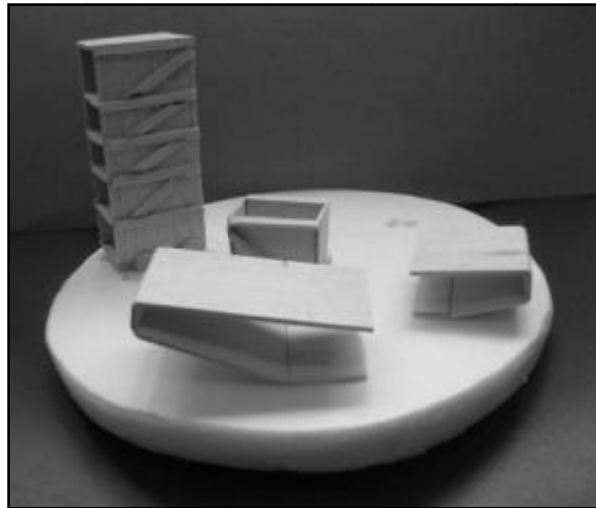
This team preferred to build a cultural centre under the railroad bridge and public space for the travelers, tourists and students; those could stay, wait the busses, train and Metro bus or meet with friends.



Picture 3: Urban Furniture Design of Group B

Group C

This team tried to build a botanical garden, in which there were resting places, cafes and public place where people could read newspaper, rest and eat something. Happening stages for fine arts students to perform their works.

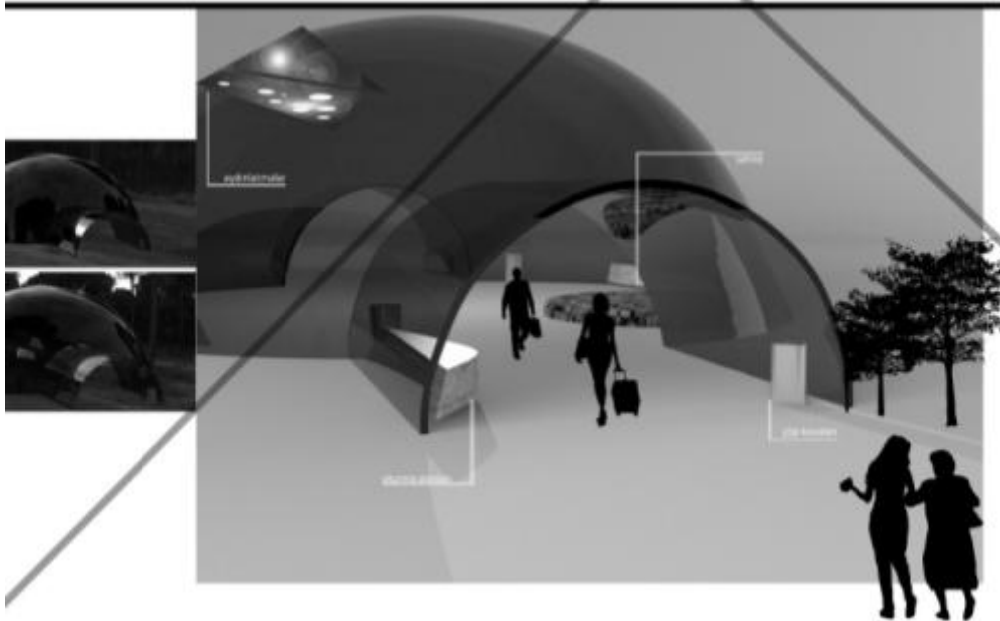


Picture 4: Urban Furniture Design of Group C

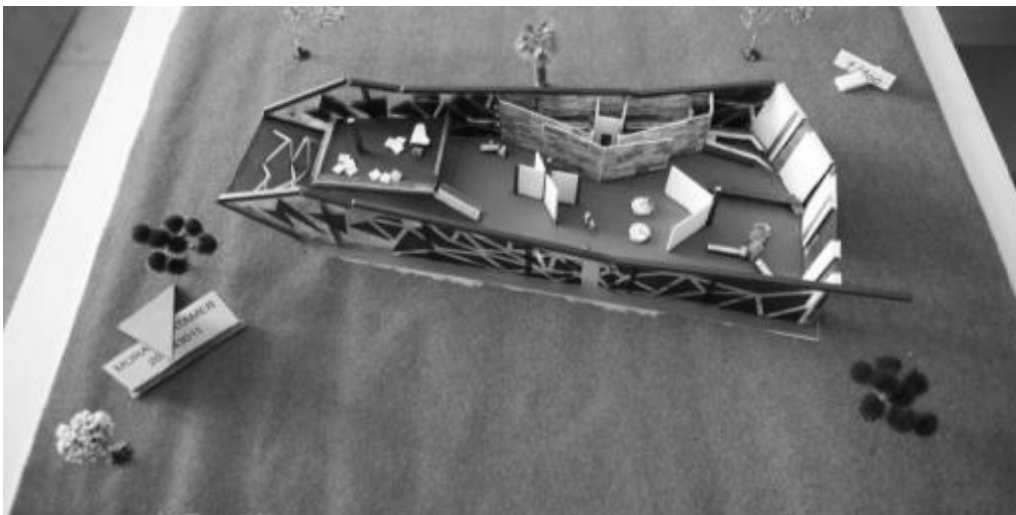
Group D

The group member formed a blog and shared their findings via that blog. This team worked on an amorphous shaped tunnel project under the railroad bridge. That tunnel would be an installation and people who would cross under the bridge had to get inside that installation. Thus, people, who had to catch public service vehicles in daily life, would also be in art and began day much more sophisticated. The group member expressed their project as;

“Eventstallation Tunnel happens to be an installation pavilion which was envisioned to build in the free field between the train station and Metro bus stops. Land tunnel attracts people by its light installations inside, that supplied by ceiling’s triangle glass reflections. There are some energy converters inside the project to keep it sustainable and let people follow the continuity of the free space that provided as an urban element. Pavilion also carries a distinction to disrupted daily life clichés of the people. In this metropolis marathon, pavilion informs people about what’s going on in the city and tells people the events and dates, hours running weekly with its interactive screens.”



Picture 4: Urban Furniture Design of Group D



Picture 5: Project of Group D

Group E

This team, - one of the participant was an Erasmus exchange student from Greece, studying at Department of Interior Architecture - designed glass ceiling-tunnels to underground. Playground area was linked with workshop areas, in which there were ceramic and other handmade ateliers for the children. Bookstore, which linked with reading area under the floor, and cafe, library for the parents, pet courts to leave pets free, were designed for the public space. Some activities for the visitors, happenings, sculpture, and chess court etc. During the night, people could use that area easily and safely and it was also the main aim of that project. Urban furniture was designed in a flexible structure for enabling to use them in various forms.



- Tasarım tırtıl formundan yola çıkılarak yaratıldı.

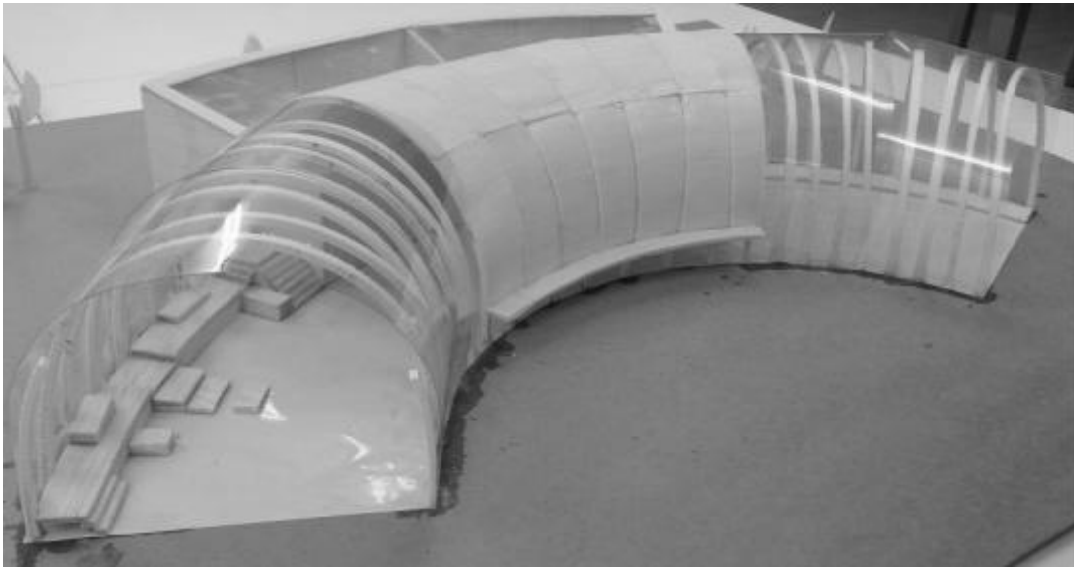
- Tasarım hareket edebilme özelliğine sahiptir. Ortadaki büyük oturma elemanı sabit olup yanlarındaki ufak oturma elemanları tekerlekler sayesinde hareket edebilmektedir. Bu sayede daha interaktif bir ortam oluşturmak amaçlanmıştır.

- Oturma mat alüminyum kasa olup içleri boştur. Böylece hareket ettirmek kolaydır.

- Kullanılan ahşap yağmura dayanıklı ve kolay şişmeyen bir ağaç olan MAUN kullanılmıştır.



Picture 7: Urban Furniture Design of Group E



Picture 8: Project of Group E

Group F

At the beginning of the project this team planned to design a cafe and furniture for the public space around the cafe. Unfortunately the team couldn't get in contact and worked separately for the same place. The participant from the department of Industrial Product Design selected the mushrooms –which need wet and dark habitat- as a concept. That participant designed benches in mushroom forms, planned to put waste containers underground for annihilating malodor and contamination. The student also designed

kiosks in which the visitors could charge their mobile phones, iPad or upload funds to their travel cards and got information about the daily happenings in the city.



Picture 9: Urban Furniture Design of Group F

Group G

This team designed a public space, where visitors could rest, wait for the busses or metro bus, and upload funds for their travel cards.



Picture 10: Urban Furniture Design of Group G

Beside those groups, one of the tutors got in contact with Hochschule Rosenheim University of Applied Sciences, and visited the Department of Interior Architecture in that university. HUB project was conducted as a workshop with the students in that department. Students worked face-to-face with the visiting lecturer for 3 days and communication for the remaining part of the design process occurred over the internet.

Group Rosenheim tried to design various activity areas for the public space. Rollerblade, skateboard rink, walls for independent graffiti designers, benches -which were not seem like a furniture but seems like a sculpture-, amphitheatre, some regions for selling products such as newspaper, beverages, tickets and a machine for uploading funds to travel cards.



Picture 11: Urban Furniture Design of Group Rosenheim

EVALUATION OF THE "HUB" PROJECT

The "HUB" project was a multidisciplinary design study that aimed to establish a transit route and a public space for the region at the intersection point of Metro bus stop, train station and the bus stops. The aims of the "HUB" project were; giving students the ability to work with students from different departments, gaining the ability of working in groups, sharing their ideas with other students and the tutors and last but not the least, gaining the ability to identify the visitors of the place and needs of the users.

According to BoixMansilla and Dawes Duraising (2007) "interdisciplinary understanding is the capacity to integrate knowledge and modes of thinking in two or more disciplines or established areas of expertise to produce a cognitive advancement—such as explaining a phenomenon, solving a problem, creating a product—in ways that would have been impossible or unlikely through single disciplinary means" (BoixMansilla& Dawes



Duraising, 2007, p.219). In that project, it was really hard for students, to solve the problems and meet the requirements of the visitors. During the project, the students of Interior Architecture undergraduate program worked on the big scale such as planning a culture centre, cafe, tunnel ect. The students of Industrial Product Design undergraduate program worked on small scale such as benches, lamps, signboards, kiosks, displays. Students complemented each other by assuming tasks in team work and at the end a finished project was submitted.

One of the aims of that project was encouraging students for working in groups and sharing their ideas with individuals from different professions. People especially prefer working by their own, instead of working in a team, cause they have to collaborate on a shared task and that requires more responsibility for the work. Beside those, in team work, while sharing ideas, conflict can arise from the predispositions of individuals, their personal goals, attitudes and previous experience. Conflict is an essential part of the team work but it needs to be managed by the partners or by the supervisors' of the project (Robinson, 2013). As conflict, frustration is another negative side of team works. Lack of participation or imbalance in the contribution is the source of frustration in team works (Burdett, 2003).

In team works it is very usual to experience conflicts and frustrations, because all participants have their own characteristics that they bring to a group. That is the basic characteristic of the team work; different ideas, disagreements, conflicts make the work much more qualified. In this collaborative work of departments of Interior Architecture and Industrial Product Design, it was intended to make students, to be extrovert, to share ideas in a group, to take responsibility, to gain a viewpoint in different professions. However as it was seen in that project, in some cases group work could be less effective than it was expected, in those cases students could be taught how to act in a group work.

At the beginning of the project, students were very excited for the project and for building new friendship. However that eagerness lasted for 3 weeks, they met with each other, shared their ideas and agreed with the design concept. At 4th and 5th weeks they presented the project together and talked about the tasks that they took. Unfortunately, as Gatfield (1999) states; one of the major difficulties of group work projects is the awarding of marks by the lecturer. The students of two different department began to worry about their marks regarding to the unequal ECTS of the courses (Urban Furniture Design (5 ECTS), Project (12 ECTS)). The students of Interior Architecture changed their concepts for getting high marks and the students of Industrial Product Design were



affected from those changes and then they decided to wait till their partners planned the final project of the building. So that decision weakened the communication and finally cause of lack of communication and willing for getting high marks directed students to work alone.

At the end of the project students submitted projects that they work on and got their marks from their own course tutor. The students of Industrial Product Design adhered to the first concept and designed urban furniture according to that concept.

CONCLUSION

As it is seen in this study, making students work in groups and submit a project together, allow them to have an idea about the professional business life. Another benefit of that collaborative work was; to gain the students an understanding of the group dynamics, developing negotiation and design making skills.

One of the most important gaining of that collaborative work in terms of the advisors was; marks have to be given to the teams, not to the individuals and for a fair mark range students as a group member have to be given tasks and complete those tasks. For that case the ECTS of the courses have to be considered and may be; the courses that have equal ECTS should be matched for the collaborative works of two undergraduate programs.

The negative side of the design process was lack of communication; they didn't meet except for lectures and that made them to act individually. The positive side of that study was; students met with each other built a friendship and also they didn't have any conflict during the decision stage. Especially in Group Rosenheim Turkish students (that study in Rosenheim) and German students worked together, and a friendship was built via cultural exchange.

Although lack of communication, preference of self-study, eventually the students were able to submitted finished projects that based on the initial concept.

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