



摄影：Iwan Baan

Music Theatre, Graz, Austria

音乐剧院，格拉兹，奥地利

客户 BIG Bundesimmobiliengesellschaft m.b.H.

建筑与景观设计 UNStudio

建筑设计 Ben van Berkel, Caroline Bos with Hannes Pfau and Miklos Deri等

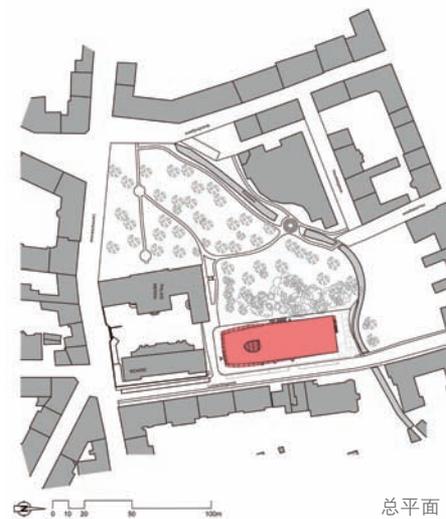
工程师 Cecil Balmond, Volker Schmid, Charles Walker, Francis Archer (Arup London)

建筑面积 6 200m²

建筑高度 15.65~16.48m

设计时间 1998~2003

建造时间 2006~2008





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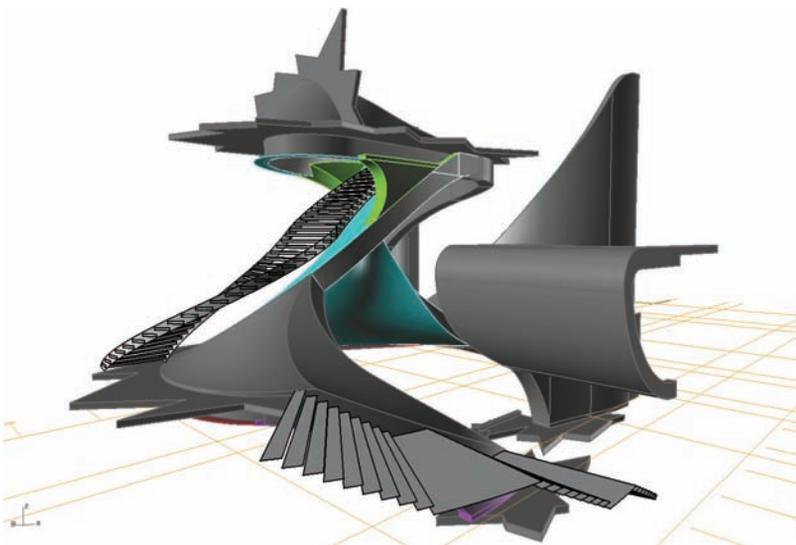
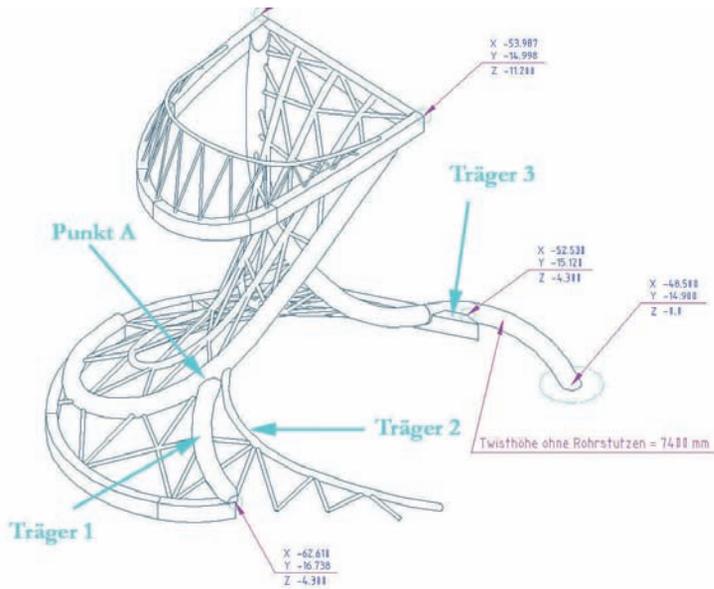


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在这个时代，音乐与建筑之间一直存在着非常微妙的关系，这可能是当代许多建筑师的想法。但对于 UNStudio 的设计师来说，可能会有所不同。今天，音乐空间仍然是一个令人非常着迷的话题，并具有惊人的潜能，勒·柯布西耶和泽塔基斯就曾一度探究其戏剧性的潜能。自从 MUMUTH 剧院归属于 Graz 音乐和表演艺术学院，这里就成为一个年轻音乐人接受表演和音乐学习的场所。因此设计师认为让建筑传递一种思想更为适合，即这是一个音乐生活在其中的房子。



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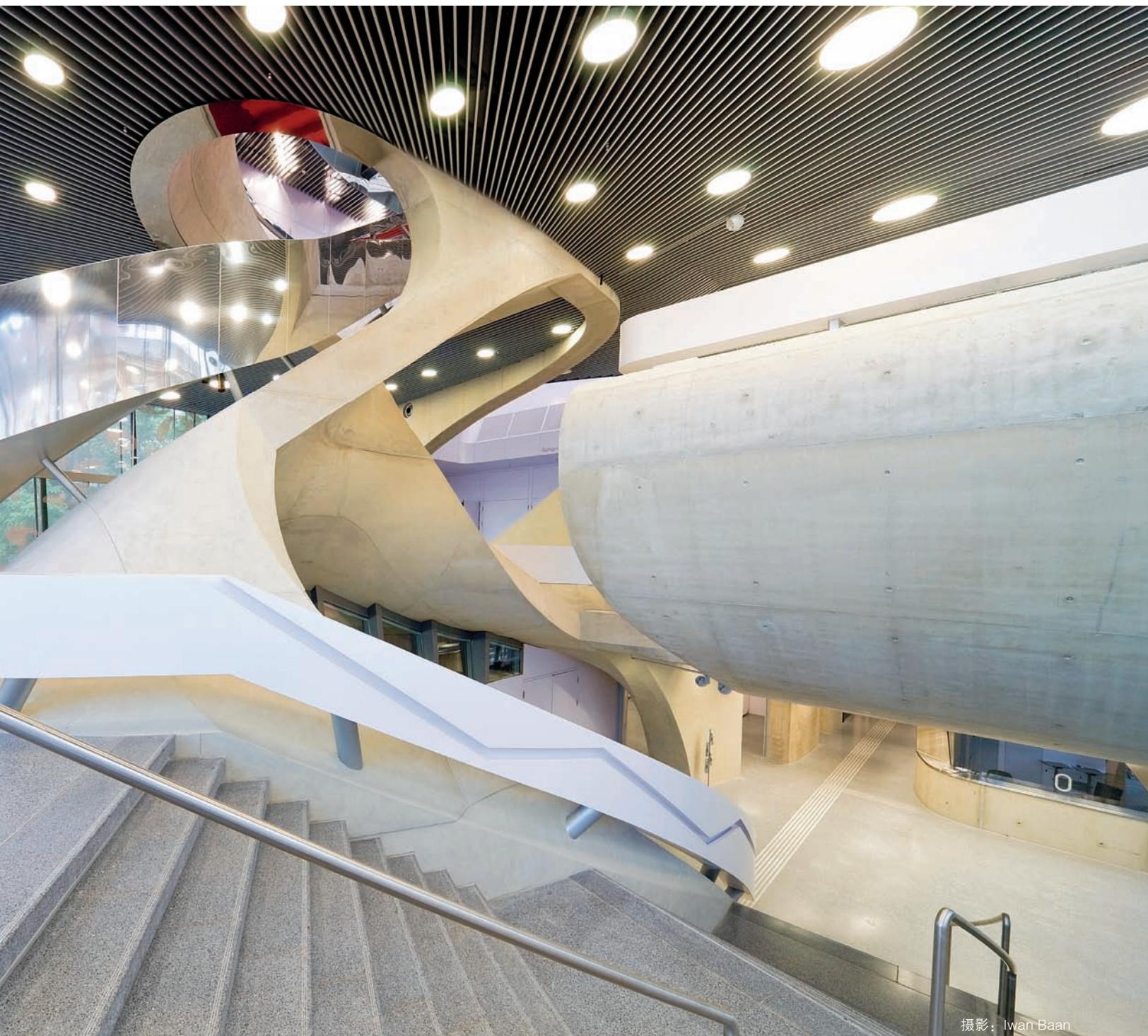
扭转楼梯



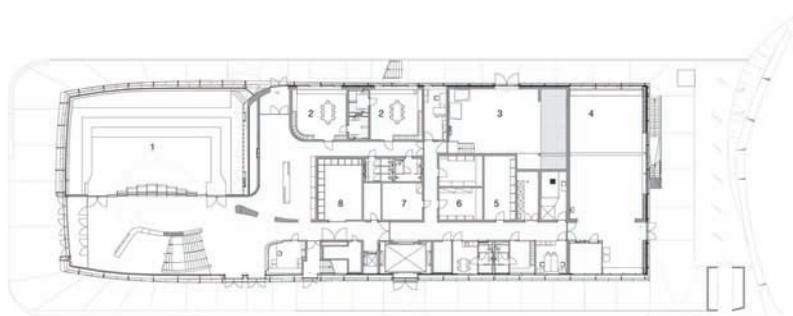
设计意图是希望建筑更像音乐一样，尽管建筑本身从最初到现在已经改变了很多，但建筑的基础和整体组织这两个主题始终不变。

这两个主题的第一个是所谓的“spring structure”弹簧结构，它传递着与音乐最直接的关系。在竞赛的第一阶段，设计还只是一些概念，设想为一种弹簧，它能够被拉伸、压缩和折叠成不同的体量，构成剧院、观众席、排练厅等其它功能空间。设计师将这个螺旋形看作 MUMUTH 的空间组织元素，就像现代音乐中的十二音阶组成乐曲的方式一样，连续的线调节了空间间隙，促成了方向的改变和尺度的跳跃而又不失连续性。今天螺旋主题在建筑内部的立面上已不再有显现，它已经被融合到结构中中了。

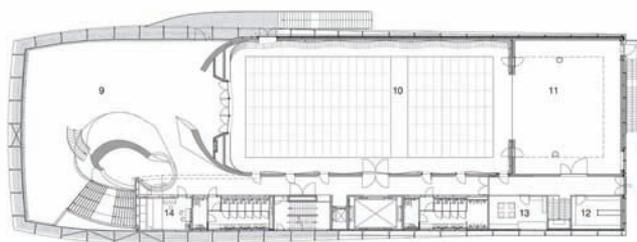
在竞赛第二阶段，设计显示出一个更为完善的弹簧概念。其实很简单，一边是相互垂直、水平向的空间，另一边则变成一个复杂的、尺度较小的主构架。这个弹簧的主构架将其自身分成许多相互联系的垂直向和斜向交叉的小弹簧，并成为设计的重要原型，被称为 blob-to-box 原型。这样一个非常简单的线性图说明了建



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首层平面



二层平面

- | | | | | | | |
|----------|---------|---------|---------|-----------|----------|--------|
| 1 管弦乐排练厅 | 3 机械设备间 | 5 道具间 | 7 电控室 | 9 休息厅 | 11 后台 | 13 缝纫室 |
| 2 化妆间 | 4 木工工作间 | 6 视听设备间 | 8 乐器储藏室 | 10 音乐厅与舞台 | 12 演出服装间 | 14 急救室 |



筑如何被构建和组合起来，组成基本单位部分和移动部分。这一组织原则使得空间之间更加有效地连接，内部空间组织更加自由和富有流动性。就像弹簧结构本身一样，blob-to-box 主题仍然保留了最终建筑的核心原则。剧院本身有着公共性，是众人集中的富于活力的场所，同时剧院又具有安静、严肃的特征，这种既灵活又理性的特征对应于观众厅和排练厅，使其各自有特殊的设计要求。

Box 这一基础单元部分位于建筑右侧，blob 的移动部分位于建筑左侧。建筑有两个入口，学生和工作人员入口位于公园一侧，公共入口则位于 Lichtenfelsgasse 一侧。夜晚演出时，学生入口就变成了有着移动壁

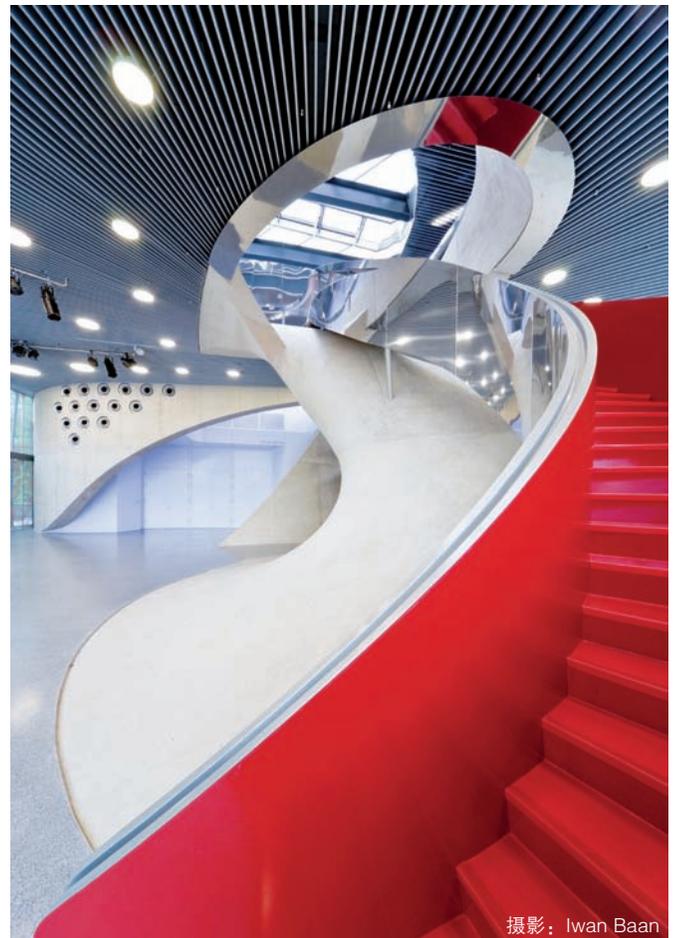


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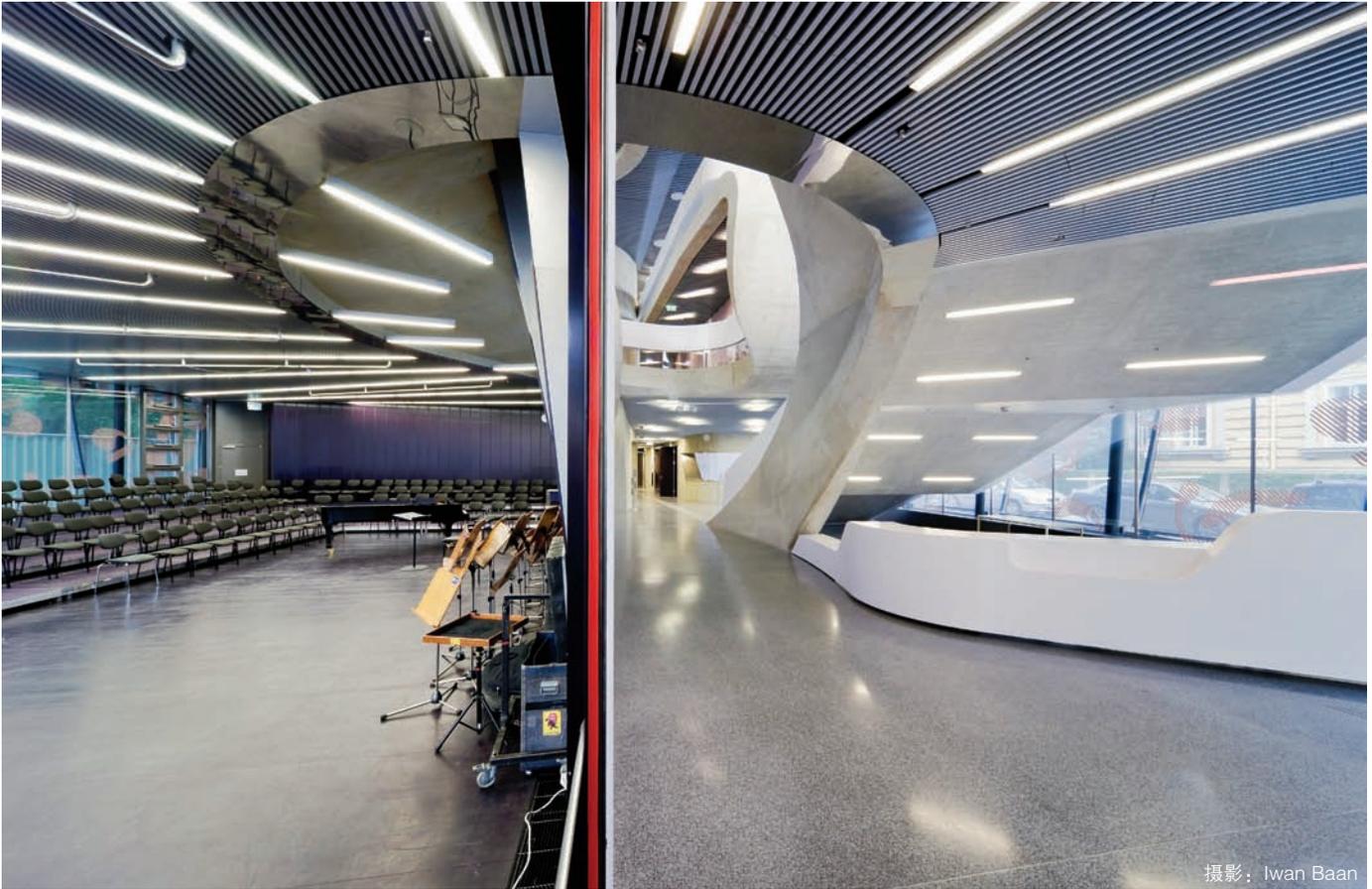
橱的戏装室。一层大厅内主楼梯下面设有可移动式售票服务台和公告屏。公众沿着楼梯上升会进入一个大休息厅，这里可以作为一个多功能的容纳近 450 人的观众厅，同时适合于从乐器独奏到管弦乐的各种演出。

休息厅中一个螺旋型的结构体创造出自由流动的空间，它在建筑一侧贯通三层空间的扭转将入口与观众厅和上层的音乐室联系起来。事实上，这个扭转是由大量的混凝土结构体形成的，施工难度极大，甚至比在奔驰博物馆中的扭转还要难度大。特殊的扭转方向使得需要更高的精确性，施工中利用密实混凝土从下至上泵送完成浇注，而没有采用常规从上至下的方式。扭转体形成了公共空间中的中心特征，周围的一切都围绕着它展开。顶层透下的天光更强化了中央扭转体，天窗由深色的木质薄板组成，光和材料细节强调出表皮一种充满涟漪的效果。

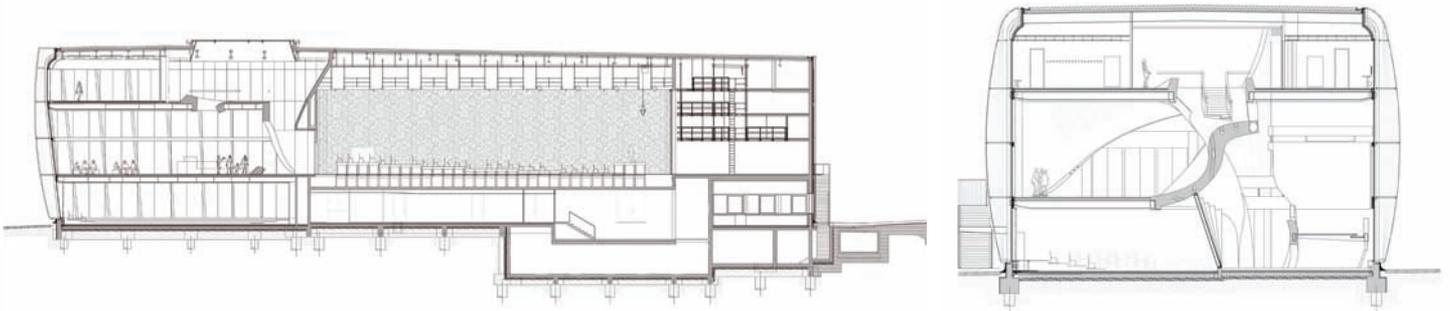
室内非常明显的弹簧结构从立面看来若隐若现，因而建筑外表皮变成一块画布，使得外部空间以一种新的方式回到了音乐的主题上。设计师一直致力于重新建立音乐与建筑之间的关系，在设计开始就关注二者共通的方面，如节律、连续性和途径。通过对吉尔·德乐兹哲学的解读，设计师发现有另一个元素是一直被忽略的，即重复。重复会产生一种浓缩、增强和间歇的集合。设计决定运用一种重复性的模式，并以多种方式应用到立面设计上。这种模式被应用在舞台构成的消声设计中，在建筑的其他方面也有运用。运用重复的模式形成的外观会随着白天与夜晚光线的变化而改变，连同立面闪烁的外层随着视角的变化，外观也会发生变化。（译 / 吴春花）



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剖面

The relationship between music and architecture is a classical one. Too classical for our times, may be the thought of many contemporary architects. But that is not our view; UNStudio likes classical with a twist... The theme of the acoustic space, explored for its dramatic potential by Le Corbusier and Xenakis is still to us a topic of fascination and incredible potential today. And since the MUMUTH theatre belongs to the University of Music and Performing Arts Graz and is therefore a place where young musicians receive their instruction in the performing and musical arts, it seems to us even more appropriate to let the architecture communicate that this is a building in which music lives.

This desire to make a building that is as much about music as a building can be, has been a constant throughout the nearly ten years that it took to build it. Although the project outwardly has changed considerably since its inception, the two themes that are at the basis of the building and its overall organization have endured.

The first of these two themes is the so-called 'spring structure' which bears the most direct relationship to music. In the first stage of the competition, the design was still very conceptual and was envisaged as an elongated spring of varying diameter size, which would alternately be stretched, suppressed and folded up inside itself to offer structure to the various volumes that together make up the theatrical, audience, rehearsal and utility spaces. We saw the spiral as the organising element of the MUMUTH in much the same way as Serialism works in contemporary music; the continuous line absorbs and regulates intervals and interruptions, changes of direction and leaps of scale without losing its continuity. Things hang on this line like laundry: glass, concrete and installations. In many ways this principle still holds, although in the building as it stands today the coil motif is no longer prominently displayed on the facades, as it was in that first conceptual design, but is now invisibly absorbed in the construction.

In fact, the legibility of the spring was dissolved only gradually. The design that was made for the second stage of the competition shows a refined spiral concept, which, like an octopus, is simple, orthogonal and horizontally orientated on one side and turns into a complex, smaller-scaled principle on the opposite side. This principle of a spiral that divides itself into a number of interconnected smaller spirals that take on a vertical and diagonal direction became an important design model for us which we

called the blob-to-box model. It illustrated in a simple line diagram how a building could be structured to combine within one, rigorous gesture a strict, unit-based volume (the black box of the theatre) and a series of flowing, movement-based volumes (foyer and public circulation). Because this organising principle is made constructive, a free, fluent internal spatial arrangement is actualised, efficiently connecting spaces to each other. And, like the spring structure, the blob-to-box motif also remains a core principle of the final building. The theatre has a public character which is dynamic and which facilitates groups of people moving through it during events, and it has a calm, quiet, intense, but also very flexible and rational character which is related to the specific prescriptions of the auditorium and the rehearsal studios.

The unit-based part of the organization (the box) is situated on the right side and the movement-based part (the blob) on the left side of the building as seen from the Lichtenfelsgasse. There are two entrances; the everyday entrance on the park side which is used by students and staff, and the public entrance on the Lichtenfelsgasse which is used by the audience when there is a performance. On performance nights, the student entrance is transformed into a wardrobe using mobile closets. A removable ticketing desk and screen bulletin are placed underneath the staircase. The public ascends a wide staircase and enters a large foyer on the first floor. This foyer gives access to the multipurpose auditorium that can seat up to 450, and that is adaptable to a great variety of performances, ranging from solo instruments to opera to full orchestra.

The free-flowing space of the foyer is made possible by a spiraling constructive element that connects the entrance to the auditorium and to the music rooms above, thus welding together 'with a twist' the three levels of this side of the building. The twist is in fact a massive concrete construction which was one of the most challenging we ever realized – more difficult to achieve even than the twists in our recently completed museum for Mercedes-Benz. The dimensions of this particular twist necessitated far greater precision and the use of self compacting concrete which was pumped up from below instead of poured down from above as is the usual method. The twist forms a central feature of the public space, around which everything revolves. Lighting and material details accentuate the ripple effect. The twist is highlighted from above by a skylight in the ceiling, which itself consists of lamellas executed in dark wood which fan out from the twist in a wave-like pattern.

With the overt presence of the spring receding from the facade as the design evolved, the exterior again became a blank canvas, generating the opportunity to return to the theme of music in a new way. Our interest in re-establishing a relationship between music and architecture had from the beginning focused on shared aspects such as rhythm, continuity, channeling. Through our readings of the philosopher Gilles Deleuze we learned that there is another element that we had not seriously studied before: the element of repetition. Repetition generates an aggregate with densifications, intensifications and intervals. Repetition brings sonority. It allows for improvisation, it marks territory, it codes milieus. We decided to use a repetitive pattern, of our own design, and apply this to the facades in various ways to achieve some of these effects. The pattern, executed in the muted tones of stage make-up, is found all over the building in various degrees of density. Its appearance is furthermore impacted by changes in light during night and day, as well as by proximity and view angles since the outermost layer of the façade consists of a glittering mesh. **At**



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