

Being and Non-being

——Negative Space of Richard Whiteley's Glass Artwork

有无相生——理查德·怀特利玻璃艺术作品的负形

山川草木，造化自然，此实境也。因心造境，以手运心，此虚境也。虚而为实，是在笔墨有无间。

——方士庶《天慵庵随笔》

“Born out of nature, mountains, rivers and vegetation are tangible. Handcrafts, by contrast, followed by mind and capture the quintessence of virtual realm. Painting is to be explained not least by the sense of truth and elegance that artistic creation entails.”

Essays on Tianyong Hut by Fang Shishu (1692-1751)

在很多创世神话中，在一切事物产生之前存在着一种虚空的状态，这种虚空超出了我们的意识而变得神秘和无法想象。虚空不是一种存在，没有尺度和内容，而空间是一种存在，有尺度和内容，以至于具有某种物质性。虚空拒绝一切思考和判断，空间则欢迎思考的介入。¹在相当一部分当代玻璃艺术作品中，不同空间的关系变换，结合玻璃这一材质的透光性、遮光性和反射等特点，使得作品更加具有可观性和内涵。在玻璃艺术作品中出现的正空间形体与负空间形体之间交错复杂的结构，和光照之下带来的虚实光影关系，使得当代玻璃艺术中对于“正”“负”形的讨论始终不曾停息。

In many creation myths, the world was nothing but a void before everything came into being. The void thus described, in effect, defies explanation and goes beyond imagination. It is non-existent, nor is it dimensional or substantial; while space implies dimension or substance, and gives the impression of materiality. Void can be interpreted as refusal to think and judge, in stark contrast to space.¹ The transformation of different spatial relationships makes it more observable and meaningful, in combination with the glass transparency, shading, reflection, etc, as witnessed by a large part of contemporary artwork. Discussions about positive and negative spaces are still taking place because of the complex structure of glass artwork and the real or virtual shadow relationship in the light.

在当代玻璃艺术家之中，以正负形的对比、光影造型的变幻作为创作手法的个中翘楚，便是澳大利亚玻璃艺术家理查德·怀特利。怀特利拥有澳大利亚国立大学艺术学院的本科学位和美国伊利诺伊大学的雕塑硕士学位。求学期间，在一次当代艺术展览中，怀特利观赏到了捷克玻璃艺术大师斯坦尼斯拉夫·李宾斯基

(Stanislav Libenský)的作品，这种新颖的玻璃艺术深深震撼到当时的怀特利，开启了他的窑制玻璃（Casting Glass）艺术创作生涯。

The creation of Richard Whiteley, an Australian glass artist, stands out from the rest as easily the best when it comes to the positive and negative comparison and changes in shadow shaping. He has a BA from the Australian National University and a MFA in sculpture from the University of Illinois (USA). Back in school, Richard Whiteley feasted his eyes on the glass work of Stanislav Libenský, a Czech maestro, during a contemporary art show. The original glass art came as a revelation to him, unveiling his first foray into casting glass art.

受到李宾斯基作品的影响，怀特利的窑制玻璃艺术也以体块为主要造型，并且变化多端的不是玻璃作品的外轮廓，而是整个作品的“负形”。如同中国的传统水墨画一样，假如将三维的雕塑与二维的绘画相类比的话，则“负形”就可以理解为国画中的留白。在中国传统艺术中，留白往往是提升境界的妙方。如同清初画家笪重光(1623-1692)在他的《画筌》中所论述，“空本难图，实景清而空景现；神无可绘，真境逼而神境生。”这些看似虚无的空洞和凹进，其实才是艺术家想要表现的主体。

Following the footsteps of Libenský, the volume forms the basis of the casting glass art of Richard Whiteley. The great variety is manifested in the negative space within the work, instead of its outline. Like traditional Chinese ink painting, the negative space may be interpreted as the *white space (liuba)* of Chinese painting if the 3D sculpture is compared to the 2D painting. From the perspective of traditional art, the *white space* tends to transform the most ordinary subject into the sublime. As Da Chongguang (1623-1692), an early Qing Dynasty painter, stated in his *Huaquan (The Fishnet for Paintings)*: “The void is difficult to be depicted, the virtual scene will stand out in silhouette, if the real scenery is as clear as crystal. The spirit is barely to be captured. When the scenery is true to life then the magnificent scene emerges.” These seemingly voided hole and concave are the subjects Richard aims to present.

在实际的玻璃艺术作品中，负形往往是随着特定环境和条件的变化而变化的一类空间造型。在雕塑这个大类别下，通常将凸出来的部分称之为正形，而相对的，就将其凹进去的部分称之为负形，即那一部分形体只是占有空气，虚无的，没有实体部分的空间。之所以称为“负”形，就是因为它与人们所认同的“正”形有所区别，但是对于玻璃这种透光材料而言，凸起与凹陷的部位界限并不是十分明显。在不同光线的影响下，从某些角度看过去，正负形之间有时是互相转换的。“天下皆知美之为美，斯恶已；皆知善之为善，斯不善已。故有无相生，难易相成，长短相形，高下相倾，音声相和，前后相随。”² 矛盾的对立面互相依存这个概念早在先秦时期就已经在老子的著作中有所表现。《道德经》中提及了“有无相生”这一有趣的概念，“有”和“无”，正如太极的两极，是相伴相生又互相变化的，美也可以是丑，善也可以是恶，有也可以是无。那么正也可以是负，固定的形态有时也会变为虚无。

The negative space varies according to the nature of conditions when it comes to the glass art. In the category of sculpture, the convex is often referred to as the positive space and the concave as the negative space. In other words, that part is nothing but a void, showing no signs of physicality. It is called "negative" because it differs from the "positive" space that people agree with. It is, however, hard to draw clear lines of demarcation between the convex and the concave of glass through which light passes. The space, positive and negative, can be converted into each other under different lighting conditions from several perspectives. As Lao Zi stated in the *Daodejing (Scripture of Ethics)*,

"The whole world recognizes the beautiful as the beautiful, yet this is only the ugly; the whole world recognizes the good as the good, yet this is only the bad. Thus Something and Nothing produce each other; The difficult and the easy complement each other; The long and the short off-set each other; The high and the low incline towards each other; Note and sound harmonize with each other; Before and after follow each other."²

The interdependence of contradictory opposites was cited in many works of Lao Zi in the Eastern Zhou dynasty. The *Daodejing* treats of the intriguing concept of "Something and Nothing," as witnessed by the two opposites of *Tai Chi* characterized by mutual companionship and transformation. The good and evil, as well as the being and non-being, could reasonably serve as typical cases. For another instance, the fixed shape can sometimes disappear without trace.

“…光在物质中颤抖，带来了一种模棱两可的感受，关于什么是固态，什么是虚无，并让我们忽略了在观察这些作品时双眼所看到的有形的东西。”

——理查德·怀特利

"It is hard to draw clear lines of demarcation between solid and void while the light is shaking. And what is more, tangible things of these works are lost in the shuffle."

——Richard Whiteley

怀特利深刻地认识到这一点，并且使用了一种特殊的创作技巧“反观其形”。对于二维的作品来说，会有一个明确的图底关系，而对于三维作品，无法寻找清晰的图底，因此将空间中向外扩展的轮廓视为正形，向内凹陷的视为负形。按照常见雕塑技法，一般先考虑作品的整体外形轮廓，先找正形，然后在正形体块上细细安排其中的各种负形。怀特利却反其道行之，往往先考虑的是作品其中的负形——透过玻璃的材质，在光照的条件下，艺术家想要重点展现在玻璃体块中的某个形状——然后再仔细考量作品外部的轮廓。正形需去迎合负形。同时，不可忽视的“光”，这一与玻璃艺术作品最后效果相辅相成的重要元素，在创作初期即正负结合。

Whiteley got a full appreciation of what this meant and took a special approach to reflection on the shape. There is a clear figure-ground organization in two dimensional designs; whereas in three dimensional designs there is no such clear relationship, accordingly, the spatial outward expanded outline is referred to as the positive space and the inward recessed outline as the negative space. In sculpture genre, it is customary to take the overall outline into consideration, decide the positive space and then arrange for negative spaces of various kinds on the positive volume in detail. Whiteley, on contrast, gave preference to the negative space, namely the void space in glass volume which through the glass material under lighting conditions, and then considered the outline of sculpture. Therefore, the positive space caters to the needs of the negative one. Meanwhile, the light plays an important role in the final artwork and realizes the combination of positive and negative spaces at the beginning.

此时作品的体积和空间是一个统一体的两个面，一正一负。可以把空间理解为负的体积，负的量感，它们可以相互补充、衬托、转化。这种强烈的空间意识是进行立体作品创作的艺术师必备的品格，同时也是潜在的视觉、触觉和动感。对于负空间的探索欲望则源于艺术家对空间语言的不满足感和对空间审美的疑惑性，从而产生了对作品空间形态多样性的追寻，并将“负形设计”作为一种主要的创作手法。

The volume and space are referred to as the positive and negative of the holistic work. The space may be interpreted as the negative volume, showing signs of mutual complementation, set-off and conversion. The strong spatial awareness is a matter of the first and foremost importance in three-dimensional creation and it may be seen as potential vision, touch and movement. The desire to explore the negative space is derived from artist's dissatisfaction of space language and the doubt in spatial aesthetics. Thereby, Whiteley started to pursue the great diversity of the space form and, meanwhile, deploy the “negative design” as his major creative approach.

具体的创作过程如图一，怀特利先将中间负形部分的石膏模具制作完成后，再用石膏板去围合这个负形的造型。这样，当进入窑炉烧制完成后，将玻璃中的石膏全部清除，之前预想的中空造型便完美的留存下来。至于整体的外形，作为“少即是多”这一理念的信奉者，他的作品外形非常简洁，基本只是一个打磨平整、足以透光的方形体块。在这些作品的后期加工时，需要对负形连到外部的孔洞的边缘部分进行精心的处理，内在造型的边线决定了负形的感观，没有多余的起伏，只留下一个圆润鼓胀的形体，以及孔洞四周微妙渐变延伸到玻璃块体上的深度，仿佛将光的能量都逐渐集中在这中间的空洞处，让虚空与实体完美的联合在一起。为了达到最佳效果，怀特利通常在铸造时就会预留出打磨的厚度，这样在冷加工时就会有很大再加工余地，可以在打磨抛光时根据需要随时调整负形边缘和肌理效果。

As shown in Fig.1, Whiteley makes the plaster mould of the negative space in the middle and then use the plaster board to enclose the negative space. In this way, the plaster is removed completely after it has been baked in the kiln, thus keeping the envisioned hollowness in perfect condition. Upon the principle of “Less is more”, his work takes shape in its simplest form, almost nothing more than a polished, transparent square. It is necessary to finish the edge of the opening whose negative space extends outwards at later stages. The sideline of inner shape determines our perception of negative space. Without redundant fluctuations, there is nothing left but a round bulging shape and the traces all round the opening gradually extending to the glass. The light, as it were, is turned on the opening in the middle, resulting in the perfect combination of void and solid. Whiteley often reserves the thickness to be polished in the process of casting. Upon this basis, there'll be plenty of scope for adjustment in cold machining. For practical necessity, the edge and texture of negative space can be adjusted in the midst of polishing.

通过这样“由内而外”的制作方法，怀特利的作品通常都很有重量感，但是又不失轻盈。因为在具有工业美的体块外形之中，是各种各样的负空间。配合着不同的颜色，内部空间通过那些交错的小孔与外部世界有了接触，仿佛正在呼吸，在光线的转换之下，呈现出一种朦胧、柔软的质感。

Through this design process of “from the inside out”, Whiteley's work balances the sense of weight and the grace of lissome. It is because inside the volume with industrial beauty, there are a broad range of negative spaces. In concert with different colours, the inner space is exposed to the outside world through interlaced holes and consequently the artwork gives an impression of breathing. In the conversion of light, the work appears a sense of haziness and suppleness.

在探寻负形语言的发展过程中，怀特利逐渐寻找到了一条属于自己的创作道路。为了凸显出在他创作中负形营造的空间特殊性，他对作品的造型、色彩和肌理都进行了恰到好处的调整。

In pursuit of the language of negative space, Whiteley gradually found his own path of creation. To highlight the particular space constructed by negative space, the shape, colour and texture of his work were adjusted just right.

在造型上，怀特利对于负形的设计和运用，参考了一些建筑空间的设计思维方法。建筑的形式语言在他的作品中有着非常明显的呈现，他试图在一件作品上创造出互相对话的空间，可以称之为“有机对话”，这种有机是指事物的各部分互相关联协调而不可分，就像一个生物体，是具有生命的、可活动的。而正形和负形也始终是在进行对话——负形好像随时要挣脱外框的束缚，而正形又始终表现得平和安静——两种情绪的对比，使得整个造型更加富有内涵。怀特利的作品倾向于表现这种组合式的带有生长性的空间。他的作品在探索着空间边缘的扩张，以及玻璃内部空间与外部空间的对比。观看者会在作品内外空间的对话中感受到光的收集与传达，直到无法分清是这光是作品自身还是外界的。随着怀特利创作理念的深化，越往后发展，这些作品中刻意去强调光线或空间的部分就越少，取而代之的是利用光影去强调相关主题。如表现人体与空间关系的一组作品，看似抽象的负空间，又好像是人体器官的简约轮廓。这些“器官”仿佛生长在玻璃块体中，带有一种细微的呼吸感。

In terms of shape, Whiteley used the method of some architectural spaces for the design and application of negative shapes. The formal language of architecture is obvious in his work. He made an attempt to create a dialogue space (hence the name—Organic Dialogue), referring to that various parts of things are inextricably bound up with each other, like a living organism. Correspondingly, the positive space is constantly in dialogue with the negative one. The negative space seems to try to break the frames while the positive space stays calmly. The sharp contrast between the two makes the shape more meaningful. Whiteley's work tends to express this combined, seeming growing space. His work delves into the spatial expansion at the edge and makes a comparison of inner and outer spaces of glass. The collection and transmission of light can be perceived in the midst of dialogue between the inner space and the outer one until it's impossible to find out whether the light emitted from the work or from the outside. With his creation going further, his work lays less stress on the light or space than on the theme with the use of shadow. For instance, a group of works shed light on the relationship between the human body and space and it is hard to draw clear lines of demarcation between the abstract negative space and the simple outline of human organs. These “organs” gives the impression of growing in glass and breathing.

在色彩方面，他早期的作品中出现过一些较为醒目的颜色，但是在作品逐渐发展的过程中，澄净和朴素的灰色系列成为主调，烟灰色、蓝灰色、灰绿色、浅棕色……对比并不强烈的高级灰相互拼接，或就某一种单独的颜色结合玻璃透光的特性制造出色彩的褪晕效果——当背投光线穿过中间的空腔时，色彩随着负形

“曝光”，渐变的色彩以一种饱满形态浮现于观者眼前。

In terms of colour, his early works had adopted some vivid colours; but clean and plain gray colours formed the basis of his work in days gone by—like smoky gray, bluish gray, greyish green, light brown. Compared with the gentle senior ash, one colour is stitched with another. Alternatively, the fade effect of a single colour is produced, onto which the transparency of glass is superimposed. In other words, the gradually changing colour presented itself in a saturated condition with the exposed negative space, when the rear-projected light is cast through the hole in the centre.

在肌理表现上，他大部分作品表面都是磨砂的肌理效果，部分作品中会出现一道道平行的细密切割痕迹。磨砂使得作品从外面看过去，内部朦朦胧胧，不甚清晰，宛若悬浮于空中的异想空间，它们柔和，飘渺，让人难以捉摸，呈现出玄妙迷离的质感；切割痕迹则截然相反，它们粗砺而明显，留下一道道似乎破坏整体的肌理效果，但是这种简约直接的效果与轻柔朦胧的磨砂、光影效果相对比，却更显出一些质朴自然的意味，好像它们自然如此。当人们观看这个空间，就像是进入了异度世界，这些作品从内部散发着神秘光线，形成一些不可名状的几何元素，那些组成它的元素又显得那么脆弱空灵，“正负空间”的虚实对比，让观众足以陷入空白和冥想。

Most of his works are given a frosted texture and fine cutting traces in parallel remain in a fraction of his works. The frosting makes the work give a vague impression from outside, just like an imaginary space in the air. The gentle, elusive and mysterious texture is manifest in his work. But, in contrast, cutting traces are coarse and distinct, producing an effect seemingly to the detriment of the whole. In spite of this, the simple, direct effect gives the simple and unadorned impression, in sharp contrast to the gentle, vague frosting and shadow effects. The art space has this power of suggesting a world beyond. Mysterious rays of light are emitted from the inside of these works and consequently geometrical elements defying explanation come along. The elements look so fragile and ethereal and the virtual-real comparison of space, positive and negative, leads the audience to have a vacant look and lose themselves in thought.

在中国传统艺术思想中，正负虚实是其重要概念之一，虚实结合，虚中有实，实中有虚。然而在虚实二者之间，中国艺术对“虚”更为重视。这一理论认为，实是从虚中转出的，想象空灵，故有实际；空灵澄澈，方有实在之美。在艺术创造中，强调关心那个无形的世界，有形的世界只是走向无形世界的一个引子，一个契机。³ 正负相生，非虚空则无以成实，非实则无以显空。负空间虽然为虚，但是它依然是可以被感知到的，并且也有体积、形状和重量，故虚空间虽无明确界限，却是真实存在的空间，并且在艺术作品中，可以延伸成为一种意象、一种精神世界的表现，引领观者去注意到玻璃艺术作品中隐藏的这些深意。

The virtual and real concept figures prominently in traditional Chinese art. The former is inextricably bound up with the latter. Still, preference, in artistic terms, is given to the virtual. In the light of this statement, the real stems from the virtual by letting the imaginations soar; the beauty lies in the real—only when the intangible is clear. Considerations of the intangible world override all other concerns during artistic creation in that the tangible world can only serve as an introduction.³ Positive and negative spaces are closely bound up with each other. The negative space, though virtual, can still be perceived, as well as the volume, shape and weight. The virtual is hard to be defined but it is the real in the artwork. And what is more, it can be interpreted as the image and spiritual world and consequently the audiences are able to search what the artwork contains at its inmost point.

在对理查德·怀特利的创作方法和艺术表现进行分析时，不难发现空间能深化玻璃材料的表现功能。正负空间互为作用，构成作品的和谐统一。对负空间的寻找体现出了玻璃艺术自身特点，其意义主要在于两方面：一方面，由于视点的增加而强调了作品的空间感；另一方面，让作品获得了形式之外的、与自然相通的完整性。在创作方法方面，怀特利具有不同寻常的逆向创作思维方式。有时突破思维定势，可能只是反相，却会诞生一片新的天地。而在艺术表现方面，他将光线与作品的充分结合，使得负空间能够扩张玻璃材料内部的空间语言，丰富了作品的内涵和外延。

On closer examination, space is capable of making the glass expressed more profoundly when it comes to the creation and artistic expression of Richard Whiteley. The positive space interacts with the negative one, living in harmony. The glass art has its particular distinguishing feature—relentless pursuit of negative space; and its meanings can be conveyed in two aspects: first, stress is laid on the sense of space by the increased points of sight; and secondly, the work attains its spatial completeness, in addition to form. The reverse thinking of Richard contributed in no small measure to his creation. Breaking the mould occasionally, though in the opposite direction, can sometimes be the gateway to a world that lies beyond. In terms of artistic expression, the light is superimposed onto his work. As a result, the negative space extends the inner spatial language of glass, extending the work's meanings, intrinsic and extrinsic.

玻璃材料与生俱来的空灵感，在玻璃艺术作品虚实对比的意象空间中又赋予造型灵性与智慧。通过艺术展示与表达，使观者产生相应的意念。思维、内涵、意念三者在作品中得以体现，此时，作品的能量被无限激发。这正验证了格式塔心理学的理论：整体不等于且大于组成部分之和。一个事物由多个组成部分构成，不仅仅有实体部分，还有实体以外的部分，由此将所见的物质延展到思想世界。

The intangible of glass infuses the artwork with spirituality and wisdom in the imagery space of virtual-real comparison. Artistic display and expression let the imaginations of the audience soar. Thoughts,

connotations and ideas are expressed to their full potential in the work and, exactly at this moment. As is stated in the theory of Gestalt Psychology, the whole is not equal to and is greater than the sum of the parts. A thing consists of a number of parts, including the physical part and those beyond the physical part. In this sense, the visible physical world is extended to a thought world.

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