

Divine Golden Ingenious

The Golden Ratio as a Theory of Everything?

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During my time studying history and art history I frequently came across the golden ratio, and have continued to do so in the course of over thirty years of curatorial work in four different cultural history museums. And just as frequently, I have found myself regarding this phenomenon with both fascination and scepticism. The golden ratio is intimately entangled in the questions of whether a universal formula could exist for ›beauty‹, and whether it could be taken as a valid standard or criterion for all proportions. Moreover, could this formula, the ›ingenious‹ proportion of the golden ratio, ultimately prove to be an essential element of beauty? If that were so, anything designed by applying the golden ratio would count as beautiful, and people could use this criterion, found all around them, as a means of training their eye. They could then clearly say whether the proportions of an object, an art work, a piece of architecture, a flower or an animal were objectively ›beautiful‹ or not. That ›school of seeing‹ found in the world's museums would then take on a very different meaning. Not only in daily life or in architecture, but especially in exhibitions, we would only encounter categories of artefacts and objects judged to be either beautiful or not.

But wouldn't life be boring and uninspiring if everything followed a single standardised formula? Where would be those surprising experiences of beauty, where would be the dramatic moments and contrasts, for example, when looking at art works? Should this harmonious ratio be the measure of all things?

The debate and discussion on the golden ratio also ›divides‹ academia, art and design into two camps – with advocates fiercely arguing for the existence and relevance of a golden ratio for the phenomenon of beauty, and equally vehement opponents arguing against it. Hence, on the one hand, there seems to be no absolutely defined beauty, since there have been and still are various competing theories of proportions. On the other hand, particular phenomena do exist which appear to follow the golden ratio and the Fibonacci sequence, and mathematical proofs provide plausible constructs of the ›divine proportions‹ they contain. Quite aside from all these diverse schools of thought, today's scholarship has incontrovertibly shown that the perception of beauty across the historical eras has undergone various changes, and that a rational and empirical standard of measurability is hardly feasible. So has the correct formula of aesthetics, the code, simply not yet been found? Or does beauty really lie in the eye of the beholder?

In fact, down the centuries there has been lively scholarly interest in proving the existence of the golden ratio in certain natural phenomenon, the hard sciences and art. From the time the golden ratio was first elevated to a ›theory of everything‹ in the nineteenth century, theoretical tracts by artists, philosophers, mathematicians, biologists and musicians – at times, with a tendency to mystification or even with an esoteric touch – have been permeated by a belief in the existence of a corresponding natural law, one providing the basis for the golden ratio, which itself could be found in aesthetic forms in many areas of life. The interdisciplinary nature of the search for the meaning of the golden ratio, both historically and today, is fascinating. For this reason, it was my long-cherished wish to stage an exhibition on this topic, and to cover a broad spectrum of the related issues and connect them to communication. There can be little doubt that few people have addressed the mathematical relations of the golden ratio or dealt with its concrete applications as thoroughly as in this exhibition – which is why it can rightly be expected to appeal to a wide audience.

Quite surprisingly, looking back, there has been no major cultural historical exhibition with an interdisciplinary approach to the golden ratio. In that sense, it seemed rather adventurous to take this as an exhibition topic, especially in the context of ›communication‹ and with the aim of answering such questions as: Why are some designs more successful than others? Why do these products appeal, while those say nothing? Why were – and are – functional objects designed in one way, and not in another? Why do we find particular colour combinations and proportions pleasing, and not others? These and many other questions relating to the communication between subject and object are worth investigating and worthy of being shown in an exhibition. It is certainly no coincidence that the credo of ›communicating by proportions‹ was the leitmotif during the intensive period of preparation for this exhibition.

Since the golden ratio was first mentioned in Greek antiquity in Euclid's *Elements*, it has had an enduring fascination. Aside from the question of beauty and harmony, the main focus has been on the search to identify a universal constant – that the ›theory of everything‹ which the golden ratio seemed to indicate must exist. The exhibition is especially dedicated to the wonder of this ›search‹. It localises its origins, offers a first, fascinating look at imaginatively orchestrated displays, traces the development of mathematical formula and, at the same time, explains traditional misinterpretations. But the exhibition also considers the significance that the golden ratio still has today, offering detailed insights into the role this principle plays in modern design processes and asking how far the golden ratio is relevant for visual communication strategies.

One key section of the exhibition focuses on the scholarly and artistic preoccupation with the golden ratio in the nineteenth century. In those years, as already mentioned, the golden ratio became widely known and discussed, with Gustav Fechner even developing an empirical psychological study designed to confirm the golden ratio's uniqueness and outstanding aesthetic appeal. The exhibition's ›showcase‹ clearly elucidates the reception of the golden ratio today, and shows how it serves as a starting point for various design tasks in architecture, graphics, product design and fashion. In this way, the exhibition traces the arc of a dynamic development from the classical world to today – with the outcome still open.

When we approached various scholars and scientists, artists and graphic artists, designers, biologists, mathematicians and architects with our idea for this exhibition, we were met with such strong interdisciplinary interest that the plan was soon born for an accompanying volume of essays. These are intended to go beyond the actual exhibition itself to provide a comprehensive and lasting overview of the many applications of the golden ratio, and the theories associated with it. The most varied positions are presented here in a wide range of formats – from essays by acknowledged experts ›On Seeking and Finding the Golden Ratio‹ to the ›Workshop Reports‹ analysing specific objects and design and research processes. In addition, a series of ›Formative Proportions‹ present various forms of standardisation, from paper to *tatami* mats, while the ›5 Theses‹ as well as ›In Conversation‹ offer an interesting range of views on the golden ratio. In keeping with this diversity of disciplines and contributors, the approaches to the much-disputed golden ratio are also very different, from scientific meticulousness to an emotional plea for the power of the designed environment on its beholders.

At this point, I would like to express my profound thanks to all those involved in making this remarkable exhibition a reality, from the contributors to the catalogue to the entire museum team. In their very different ways, they have all played their part in making this project a success. In addition, I would especially like to thank the staff and students of the BEST Sabel School of Design Berlin who, as the result of a fruitful cooperation, have contributed valuable insights into the real-world application of the golden ratio, to Brousse & Ruddigkeit Berlin, who have given the catalogue its distinctive design, the Hirmer Publishers Munich for the publication of this accompanying volume and, last but no means least, Franke | Steinert Berlin who accompanied the long journey of this project from planning to reality and expertly designed the exhibition.

Divine Golden Ingenious – The Golden Ratio as a Theory of Everything? is a temporary exhibition. It will also be shown at other venues including our other Museums for Communication in Nuremberg and Frankfurt.