

A Study on the Interactive Relationship between Modern Science and Art Background in Renaissance

Yun Wei

Shenzhen Foreign Language School, Shenzhen, China

13713736306@163.com

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Abstract: The interactive relationship between art and modern science during the Renaissance was a serious challenge in promoting the integration of culture and knowledge. The article takes the interaction between art and science during the Renaissance as the research object, sorts out its basic manifestations and characteristics, and after an in-depth analysis of the emotional presentation and formation reasons for the interaction between art and science, proposes strategies to address the interaction between art and science from four directions: art education, science popularization, interdisciplinary research, and cultural policies, to promote the rational and healthy development of the cultural and knowledge fields during the Renaissance.

1. Introduction

The complex and ever-changing academic topics are intertwined with the interaction between art and science, mixing with various collisions of ideas and philosophy, and affected the understanding of culture and knowledge during the Renaissance, as well as scholars' understanding of the process, speed, and threat of the interaction between art and science during this period. In addition, once a large amount of academic research on the Renaissance forms a systematic theory, it will intensify the in-depth exploration of the interaction between art and science and become the focus or catalyst of academic research. Especially in today's world where interdisciplinary research methods are advanced, scholars have made the interaction between art and science during the Renaissance a research topic. At the beginning of the new academic topic, scholars focused on publishing numerous related studies in the academic community, which posed a serious challenge to understanding the cultural and knowledge fields during the Renaissance. These studies not only affected the depth and breadth of academic research, but also disrupted the academic community's understanding of the Renaissance, causing great obstacles to academic research, and damaging the credibility of academic research. Therefore, guiding and regulating the research on the interaction between art and science during the Renaissance has become a major academic issue that urgently needs solving [1].

2. The Basic Performance and Characteristics of the Interaction Between Art and Science in the Renaissance

2.1. The Mutual Promotion of Art and Science

The development of art and science during the Renaissance was inseparable from each other's promotion process. When the scientific revolution was related to the innovation of artistic expression, art, and science would become hot topics of cultural concern [2]. In the potential crisis awareness in the cultural and knowledge fields, the interaction between art and science, which is infinitely magnified, will continue to increase the attention to the topic. Once opposing viewpoints arise, scholars will quickly engage in discussions and debates on the topic, leading to common debates and confrontations in the academic community. Collective wisdom is mobilized throughout the confrontation process, and the interaction between art and science also exhibits interdisciplinary

characteristics. In addition, for different types of academic topics, scholars often mobilize knowledge resonance in different fields to enhance the participatory and confrontational interaction between art and science. With the development of the Renaissance and the continuous enrichment of the interaction between art and science, false information in the academic community constantly emerged, adding tension to academic confrontation. Summarizing the interaction between art and science during the Renaissance, it can be found that the outbreak point and development direction of the scientific revolution have gradually become alienated. As soon as it appeared, it was "rhythmic" by the academic community. The objective and rational analysis of the interaction between art and science during the Renaissance has gradually become a labelled and stigmatized expression.

2.2. The Attitude of Interaction Between Art and Science

Faced with various issues arising from the interaction between art and science during the Renaissance, academic public opinion often presents an open and exploratory discourse tendency. Especially in the interaction processing between art and science, topics such as humanism, realism, perspective, and scientific experiments, once they appear in the academic community, will quickly attract the attention of scholars, and the fermentation speed of interaction between art and science will continue to accelerate. Public opinion of the interaction between art and science has rapidly gained popularity in the academic community under the influence of academic exploration effects. "Knowledge is power," as Leonardo da Vinci said, "When art and science gather in groups, their emotions and thoughts will turn in the same direction, their independent and individual autonomy will disappear, leaving only a collective psychology." Scholars often exhibit a disregard for the truth and emotional impermanence, even losing their original rationality and rational judgment. Academic public opinion expression often presents a blind state of self-expression under the influence of emotions, with some academic topics experiencing reversals, leading to a shift in academic public opinion expression from one extreme to another. Under the drive of interest, the academic community usually uses hot topics to grab traffic, using bizarre content, exaggerated plots, and highly rhythmic sound effects to stir up the emotions of scholars, pushing hot events to the forefront of public opinion [3].

2.3. The Phenomenon of Interaction Between Art and Science

The phenomenon of interaction between art and science during the Renaissance has been accelerating, and the pressure of integration between culture and knowledge has been increasing. People are increasingly pursuing sensory stimulation and knowledge, especially in art and science, which is gradually diversifying. The special environment of the Renaissance changed people's way of life and thinking, and the misunderstandings and barriers between culture and knowledge fields made scholars more inclined to express themselves in academic space and seek comfort. This interaction has gradually given rise to the interaction between art and science, which is a trend and academic phenomenon driven by multiple factors such as humanism, realism, and scientific experiments, which regard the interaction between art and science as a fusion of culture and knowledge [4]. It contains a value judgment that regards the interaction between art and science as the primary or the only criterion. The expression of public opinion in the interaction between art and science is mainly reflected in commenting on academic hotspots through humorous, humorous, parody, sarcastic, and nonsensical language, especially the emergence of many academic languages, which not only express the individual emotions of scholars but also project opposition to mainstream values. The basic performance and characteristics of the interaction between art and science in the Renaissance are shown in Figure 1.

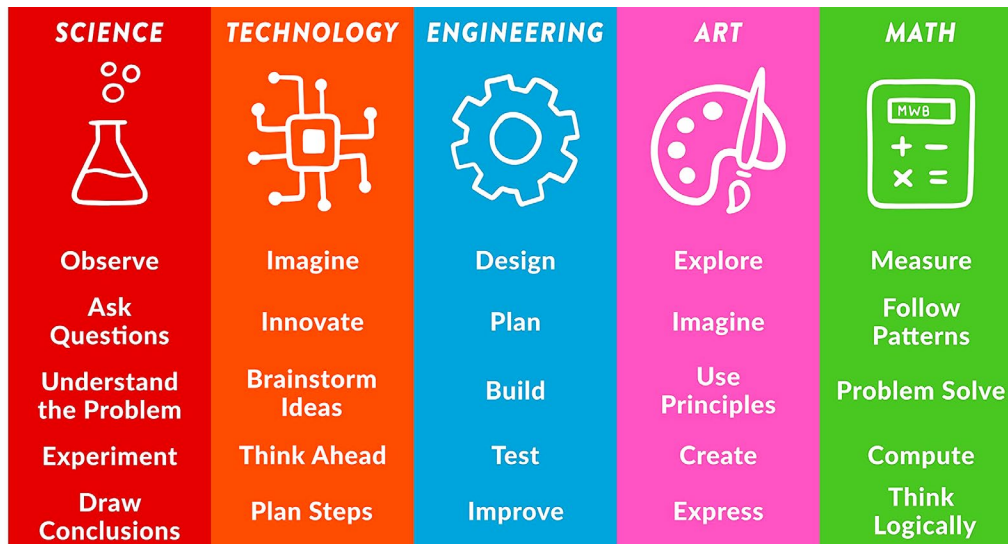


Figure 1: The basic performance and characteristics of the interaction between art and science in the Renaissance

3. The Emotional Presentation of the Interaction Between Art and Science in the Renaissance

3.1. Curiosity and Exploration: Positive Emotions with a Strong Desire for Knowledge

The interaction between art and science during the Renaissance aroused the curiosity and exploration of scholars. All factors such as humanism, realism, and scientific experimentation that promote the development of culture and knowledge can be attributed to the interaction between art and science. Scholars believe that if there is a strong driving force in academia, it can change the status quo, and this strong force can be driven by curiosity and exploration. On the contrary, if scholars are powerless against reality, they will be disappointed and frustrated. Public curiosity and exploration will quickly escalate once academic public opinion involves the interaction between art and science, resulting in significant academic phenomena. Therefore, from a psychological perspective, among all human emotions, curiosity and exploration have the fastest transmission speed and strongest infectivity and have the greatest impact on academic public opinion. Almost all scholars cannot completely stay out of the group and maintain a calm mind. Instead, they are ignited by emotions within the group, which helps to spread curiosity and exploration [5].

3.2. Openness and Doubt: Recessive Confrontation Expression Strategy

Openness and doubt are another way of expression in the academic community, a rational emotion, and their connotation is also an expression strategy for the interaction between art and science. When the objective reality of the Renaissance conflicts with the ideals of scholars and creates great disharmony, there will be expressions of openness and doubt in academic public opinion, conveying a sense of powerlessness towards academic research in reality. Therefore, openness and doubt are seen as weapons of the academic community, which is a hidden resistance. When the public feels that collective behaviour requires a greater price, they will avoid academic risks in this way. The expression of openness and doubt has humour, and scholars using humorous, open, and doubtful language to express their dissatisfaction will attract more scholars to watch and praise, and it can also spread faster in the academic community [6].

3.3. Awe and Respect: the Deep Emotions of Human Nature

This emotion is often accompanied by curiosity and exploration. When this emotion leads to the misfortune of the academic object that scholars respect, the deepest human emotions of scholars are stimulated and show feelings of awe and respect. Of course, this emotion is also an extremely beneficial academic phenomenon, just like the realization of academic exploration psychology, which creates balance and pleasure in the depths of the heart. The emotions between scholars in

different academic fields are gradually moving towards opposition, and the mentality of awe and respect is constantly amplified. When the so-called authority in the academic community is questioned, the mentality of awe and respect will "infect" each other, and the full picture and truth of the event are often ignored by scholars. This emotion is particularly prominent in various academic phenomena arising from "academic exploration". Although awe and respect are secondary emotions, they can also become emotions for scholars, who use them to vent their dissatisfaction, curiosity, and exploration [7].

4. Analysis of the Causes of the Interaction Between Art and Science in the Renaissance

4.1. The Weak Gatekeeper of Academia

There is a saying in the academic community that goes, "When people believe that their actions will not be held accountable, they will become unconstrained by academic customs and rules.". The Renaissance gradually weakened the "academic authority" of the academic community, allowing scholars to conceal their true identities, express and vent their emotions in an unconstrained state, and even trample on their rightful academic responsibilities and morals. However, the academic community lacks supervision over speech and research with strong biases and extremism, resulting in irresponsible speech and research repeatedly appearing in academic hotspots. As a new venue for interaction between art and science, the academic community should review its published content. However, due to the large scale of scholars, uneven quality, inadequate academic regulatory system, and the pursuit of academic influence and economic benefits, the academic community has faced weak scrutiny, ultimately contributing to the proliferation of interaction between art and science [8].

4.2. The Changes of Academic Ideas in the Renaissance

The deep-seated reason for the irrational expression of the interaction between art and science in the Renaissance is the profound change in academic concepts brought about by the academic concepts of scholars during the Renaissance. The academic concept of the Renaissance brought about changes in academic concepts, changing the ideas and behaviour of scholars. The continuous infiltration of academic concepts during the Renaissance in the academic community has led to a high degree of integration between reality and academia. Academic discussions and research in the academic community reflect the dissatisfaction of scholars with life and academia and are also the root cause of negative public emotions. This interaction is gradually spreading. Psychology believes that it is almost impossible for human academic behaviour to be conducted in an objective, fair, and emotionally independent manner. The emotions of curious and exploratory scholars are mostly irrational, and their negative perception is the main reason for the irrational expression of the interaction between art and science by the public. It is also a concentrated reflection of the academic phenomenon during the Renaissance [9].

4.3. Academic Group Polarization Aggravates the Formation of Extreme Public Opinion

The extreme public opinion formation of the interaction between art and science during the Renaissance mainly originated from the polarization phenomenon within the academic community. When there are opposing views within an academic community, there is often a one-sided and one-dimensional stance within the academic community. The homogeneity of academic groups can lead to a convergence of public opinion within the group, while individuals with different opinions may choose to voice homogenization or silence to avoid marginalization and isolation, or out of the instinct to seek benefits and avoid harm. Most people tend to reinforce dominant opinions, and the strengthening of these opinions fully confirms the theory of group polarization in social psychology [10].

The polarization phenomenon of academic groups has a great influence on the group and constantly permeates externally. When the emotions within the academic community are spread and infected to a certain extent, a high-density and high-pressure public opinion atmosphere will be formed. At the same time, this extreme emotion may be the release and eruption of a specific

academic group after enduring long-term academic disputes, accumulated knowledge conflicts, or accumulated academic emotions. When the topics within the academic community involve sensitive interactions between art and science, members of the group will freely express the true emotions of the real academic community within the group, even leading to extreme expressions, filling up the emotions within the group and constantly spreading, thereby triggering academic controversy. This behaviour leads to a large gathering of extreme expressions, posing a great threat to healthy discussions in the academic community.

4.4. Information Foam Strengthen Prejudice

At present, the information foam in academia is common. Information foam refers to individuals or groups who tend to contact and share information consistent with their views while ignoring or rejecting different or opposite views so that they have a supreme sense of identity and belonging in information acquisition and communication processing. The phenomenon of information foam in academia has led scholars to accept knowledge through incomplete information, recognize the nature of academic objects from their values, and quickly gather in academic groups with the same views. Scholars have said, "In academic communities, individuals do not seek like-minded individuals with different viewpoints, and even view those with different viewpoints as competitors. However, when we agree with a viewpoint, we always seek like-minded individuals.". The individual beliefs and cognition of members within the academic community gradually solidify, and individual viewpoints become group attitudes after group discussions, which are usually more extreme than individual attitudes within the group. Therefore, the extreme phenomenon after group discussion will be more intense, and those words or behaviours that do not conform to the so-called mainstream views will be strongly criticized under the information foam. The extreme phenomenon brought about by this information foam can obtain more large-scale academic support, and make the extreme views obtain realistic legitimacy [11].

5. The Path Selection to Promote the Healthy Development of the Interaction Between Art and Science in the Renaissance

5.1. Strengthen Academic Monitoring and Judgment, and Block the Transmission Channel of Negative Information

Because of the new problems and risks in the current academic ecology, academic institutions have deployed and carried out a series of special actions to centralize the rectification of academic misconduct, optimize the academic environment, and combat academic foam. The monitoring and analysis of academic public opinion information through academic technology is a prerequisite and foundation for conducting academic governance. Fully utilize the functions of academic technology analysis and precise algorithm technology to timely detect and control the release and dissemination of negative information in virtual space, while maintaining the inherent characteristics of academic public opinion and maintaining a moderate tension between rationality and standardization. On the one hand, the entire network integration of academic circles, academic journals, academic conferences and other platforms is carried out to accumulate academic public opinion information data. At the same time, the information is classified and organized, and a general database is established to form "block data", providing a basic guarantee for collecting and analysing interactive information between art and science in the academic community. On the other hand, establish a continuously updated interactive analysis platform for art and science, unify and integrate data collection, intelligent management, and precise algorithms, and timely automatically capture, classify, filter, monitor, and analyse key platforms and information. Academic institutions continuously track key information and accurately control core information based on the patterns and characteristics of art and science interaction events, providing technical support for early warning and analysis of art and science interaction.

5.2. Build an Open Academic Dialogue Platform to Promote the Formation of Academic Consensus

The academic community should establish an open dialogue platform to encourage the exchange and clash of diverse academic perspectives, fostering the development of academic consensus. Through this platform, scholars can engage in in-depth discussions on various perspectives and methods of interaction between art and science, thereby fostering knowledge innovation and academic development. At the same time, this platform should also serve as a mechanism for academic self-supervision and self-purification, enhancing the quality and credibility of academic research through peer review and open discussions.

5.3. Establish a Sound Academic Evaluation and Incentive Mechanism

To promote the healthy development of interaction between art and science, it is necessary to establish a fair and transparent academic evaluation and incentive mechanism. This mechanism should be able to objectively evaluate the research achievements of scholars, encourage innovation and interdisciplinary research, and punish academic misconduct. Through such a mechanism, it can stimulate the enthusiasm of scholars for research, promote healthy competition in the academic community, and improve the overall level of academic research.

5.4. Cultivate Critical Thinking and Multiple Perspectives in Academia

The academic community should prioritize cultivating scholars' critical thinking and diverse perspectives. This behaviour will enable them to analyse problems from various angles and prevent them from being trapped in a singular mode of thinking. Through education and training, we aim to enhance scholars' understanding and tolerance of diverse academic perspectives and to promote diversity and inclusiveness within the academic community. In this way, the academic community can better understand and explain the complex interaction between art and science, and promote the in-depth development of knowledge [12].

6. Conclusion

By conducting in-depth research on the irrational expressions and causes of the interaction between art and science during the Renaissance, we can gain a better understanding of the academic phenomena of this period and offer guiding suggestions for promoting the healthy development of this interaction. This type of research helps to reveal potential issues in the academic community when dealing with the interaction between art and science. It also promotes the wider application of interdisciplinary research methods in academia, fostering innovation and the development of knowledge. Therefore, an in-depth exploration of how to effectively promote the healthy development of the interaction between art and science during the Renaissance is of great theoretical and practical significance for understanding the progress of human knowledge and cultural development.

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