

CULTURAL SPIRIT AND DESIGN ANALYSIS IN THE OLD ERA OF ROBOT DESIGN

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ABSTRACT

Explain the background of robot animation in the old era and the necessity of the current spiritual and cultural construction

This study aims to analyze the positive forces contained in the Japanese robot animation in connection with the mechanical setting of the golden age of the last century, and use them for the reference of the robot setting. Mechanical setting is the most intuitive commercial value of all robot animation, and excellent mechanical setting is the primary consideration index to attract the audience. It is also the most intuitive influencing factor of commercial realization. The design method is as follows: Collect the audience and preference range of related products through questionnaire survey, such as 1) investigate whether the audience likes super or real, 2) what models current enthusiasts contribute to, and 3) what are the common characteristics of popular artistic images

Keywords: design elements, time background, Japanese robot animation

INTRODUCTION

Giant robot this kind of culture originated from the Japanese animation industry after the end of the second world war as the defeated Japan, in the cultural products cannot shape the war hero this image, so many Japanese cultural practitioners find a new way, with transformation, aliens, monsters and other novel cultural content to show the cultural creation of protecting peace. It is also under this cultural background that giant robot animation works developed and became popular around the world in the long development of the world, even in that era. Robot animation represents the Japanese animation industry.

In Japanese animation, although there is not no robot setting based on production and processing, most of them are mainly combat robots. Although the romantic setting of giant robots is contrary to today's mainstream military theory. But this kind of decisive battle weapon thinking is real in history. It took only 29 years to go from the first rocket engine to the American moon landing. The rapid progress of technology gave the human beings an incomparable strong confidence at that time. People are not only happy to imagine the future, but also willing to put this romantic fantasy into film and television works. Therefore, since the late 1970s, the golden age of screen science fiction has arrived. From 1963 to today, robot animation still maintains a strong vitality in the industry, and has great commercial value in reality.

Robot animation was derived from the left wing movement in Japan. Due to the failure of the Japanese left wing movement, the relevant personnel involved in the left wing movement put their expectations on cultural creation. Therefore, the beginning of robot animation contained the meaning of resistance to power. Due to the great commercial success, the connotation of robot animation has gradually occupied a place in Japanese traditional culture under the progress of technology and cultural development. It can even be said that robot animation is the blood of the Japanese animation industry, and its development process is the

epitome of Japan's economic development. Closely related to the real world, it has experienced the process of birth, development, peak and decline.

Porouis V was broadcast in 1977, and the protagonists realize that the root of the war is a decadent dictatorship and finally decide their whereabouts. Due to the profound connotation of anti-discrimination and anti-dictatorship, the film was once banned by the Makos dictatorship for ten years in the Philippines, and eventually led to the famous Aquino Uprising.

The film is a national animation in the Philippines, 2024 the Philippines launched a new live action "Porucci V-Heritage" redesigned the Porucci V.

This also makes me have a strong interest in him, because the artistic image really affects the reality, which is very incredible, I hope to have a better understanding of the ideological power contained in them project

The research hopes to analyze the common ground of robots in different eras in the same design, and to study the influence of the audience at the time and the background of the time. Why was this robot setting widely recognized by the audience at the time? Did he bring an influence to the later generations? Robot animation, as an artistic carrier, did not consider the commercialization in reality, so how did people realize these designs to realize their commercial value? Focus on discussing the beginning and development process of robot development. If we want to create a popular robot image, what should we preserve from the old age of design? These raise the question of this study, what should be included in the robot design elements?

target

1. Analyze what the robot design elements should include and the appropriate graphics and multimedia design elements.

METHODS AND PROCEDURES

This study adopts the method of qualitative research, and the research process collects nearly 100 questionnaires to analyze the current aesthetic needs and the market scope of this type of art design.

RESULTS AND EFFECTS

In general, the current animated robot image is gradually moving towards a more realistic direction. Influenced by the real commercialization, they usually prioritize the model, and then add the Settings in the painting according to the demand. Today's robot animation is no longer like the old century robot animation, which contains a lot of will. Many robots in the old century even have their own thinking, while the current robots are closer to pure war weapons, their arms are more aggressive, and they rely heavily on the use of military logistics reserves. If you want to inherit the spirit of the old century animated robot, it is obvious to create a robot to strengthen its independent combat ability, and his weapons cannot rely on bullets such as machine guns, which depends heavily on logistics and cannot be replenished at any time. As we all know, the two disciplines that hinder human development are energetics and materials science. Because in the robot animation, it is difficult to appear the robot energy shortage situation. In order to limit its performance, it generally has more energy than the robot itself, needing to dissipate heat to limit its duration. The resulting crack nail and various mechanical internal structures are widely recognized by the audience in the new century



Figure 1. Mazinger Z, RX-78-2 Gundam, GaoGaijar, the three important images in the history of robot development
Source: Wike, 20223

The original Mazingerz has a set height of 18 meters and weighs 20 tons. Its main color scheme comes from Astro Boy, and its arms and legs are dark blue. The body and torso are widely used in black and used in light gray, the chest is a red heat plate, and the head is a cockpit. In the early setting, its arms and legs were set in black, but in the later version, the dark blue was changed, hence the name Black Iron City. Mazingerz The face is very distinctive, and other plot works depict the protagonist as an angel of justice or a knight of justice. As its name is Mazinger, its golden eyes, horns on both sides, the mask like a binding instrument, and its dark blue face, are very similar in the traditional sense. In Japanese folklore, at the same time, its flight component jet flying wing is very close to the bat wings in the shape, further strengthening its demon shape. Although classified as the righteous side, in fact, the definition is very vague. In the plot, with the mouth of the virtual characters it has created, it is described as a robot that can become either a god or a demon. This may reflect that the definition of the creator is not good or bad, but it needs to see what the user tends to be. The head is its most characteristic friend number. As the first manned robot, Friend is red and can see the driver through its transparent panel. In each attack, the Mazingerz will be released from the warehouse, and the friend will land on the head of the Mazingerz through an external connection, and after the connection can attack. The early Mazingerz, which conservatively produced only 500,000 horsepower, was described as rival the US Seventh Fleet.

Mazingerz Using a fictional superalloy z in the setting, giving him a strong defensive ability. His driving force is the fictional photon force. From this is its characteristic five armed forces. Photon force rays emitted from the eye part. The chest flame fired from the heat release plate of the chest. A rocket flying fist fired from the wrist. Corrosive hurricane blowing from the mouth cooling hole. A missile launched from the belly. These five armed forces, as the standard configuration of super robots, were inherited by the successors in the following decades.

Here, we do a simple analysis of the design of Mazingerz image, facial modelling from the Japanese myth of evil ghost brake, overall modelling contains from bat wings vampire demon modelling, enough to the strength of the American fleet, in fact, contains part of the creator for the power of the Japanese social discontent and desire. As is known to all, Japan is a country with poor resources, cannot bear the pressure of huge forces, so Japan and Britain on the fine road, also is special machine or decisive weapon ideas, therefore, in the series, Mazinger z no energy production, imaginary enemy as the United States may be the creator realized Japan's biggest pressure comes from where. And his demonic shape may have come from his dissatisfaction with the existing government. As is known to all, the emperor of Japan has been

packaging himself as the god of Japan. In Japanese mythology, the order to attack evil ghosts is generally directly issued by the emperor. I have experienced the cultural creators of the left-wing movement, and I am likely to inherit my resistance will as the image of Mazingerz. In the next era, the Mazinger z colors and symbols were inherited from a lot of robots.

Mobile fighter gundam has been active on screen since the first half of 1979. As one of the world's most famous robot images, its birth is actually relatively bumpy. His creator is a famous Japanese playwright, animation supervision rich wild by leisurely season, once in tezuka worm opened heavy production company work because he had experienced Japan before and after the student movement, against the problem to the government, therefore, in his later works, resistance spirit is almost into the work itself. As he said, gundam is often born in the Union (the fictional ruling class of the earth), but he is always driven by some very rebellious people, and always ends in 708, without his head, but the spirit of resistance is still alive.

As a robot that advances the branch of real robots, gundam is much weaker than any other superrobots. The shape is derived from the traditional Japanese samurai armor. The color matching is also very different from the early Mazinger grade super system body, red, blue and white has been in the gundam this real attack body as the protagonist of the royal color matching, has been continued. Unlike early robot animation, the Mobile Suit gundam is closer to pure weapons of war. The iconic beam rifle and possibly inspired by the Star Wars series beam saber, which are also the two major standard equipment for real robots. In fact, gundam's performance in the plot has always been weak except the beginning. This may be to show the cruel side of the war, although gundam plays a feat of rewriting the battle in the story, but it can not save many innocent lives involved in the war.

The birth of gundam means that the robot animation has entered a new era. From then on, animation is not just for children to watch more young people to find more space to think on it. From the perspective of artistic creation, the birth of gundam was also separated from the influence of Mazingerz and created a new route called authenticity. In this route, pay attention to the modular design, close to the reality of the military design, pay more attention to the practical, scientific, rational modeling is its biggest feature.

gaogaigar From the perspective of plot setting, it is inclined to be real, while the mechanical setting of gaogaigar itself is inclined to be super fine, and its armed and color matching are also very classic. The rocket flying fist inherited from Mazingerz is its signature arm. The shape is also closer to the traditional Japanese samurai armor. At the same time, it cleverly integrates a variety of common objects in life, with its shoulder armor coming from the Japanese Shinkansen 700 series. After nearly 20 years of development, the operation of how to turn the animation art image into ready-made real economic benefits has been very mature. Therefore, at the beginning of its birth, gaogaigar considered how to design the reality model, and the detailed mechanical structure will be highlighted in each combination. Although its combination, combat mode are very super, but to add a lot of gear, hydraulic rod piston, air grille and other details to strengthen its sense of reality, is one of the perfect combination of real and super models.

Both the background of the story and the combined design are showing the expectations of the Japanese people of that era, perhaps in the hope that the world alliance could save the collapsed economic situation of Japan at that time and restore confidence. The mechanical setting of this period has once again returned to the color matching and armed design of the early robots. However, more bias to the real design of the piston, hydraulic rod and other mechanical modeling are added, so that it can further strengthen the sense of reality.



Figure 2. The proportion of Mazinkaiser is two triangles
Source: wike, 2023

His limbs are far larger than his limbs, to reflect the weight of the robot. His thighs are far smaller than his calves, increasing the grounding area allows the model to stand more steadily, and it is also purely aesthetic considerations, to ensure that the limbs look consistent, the armor of the corresponding arm part is also thickened. The original robot prefers a positive triangle in terms of its overall profile. In terms of design, this appearance is actually more in line with the broad lower female limbs. The new design of the robot is biased to the reverse triangle, because the shoulders are more prominent and easy to emphasize its sense of strength.

Mechanical details first appeared in the real robot, is the use of a variety of gear organs, hydraulic rod piston and other real engineering equipment details to increase the sense of reality for the work, to provide persuasion for its sense of power. It is reported that to the mechanical setting above the more common is the hydraulic piston rod, closed lock joint, heat dissipation plate, gear mechanism, energy pipe and other details. These designs generally do not expose directly to the outer armour and are usually designed inside the machinery. But usually in order to show its mechanical properties, these details are usually exposed through the deformation mechanism or the crack nail mechanism at special times.



Figure 3. Paul from The Good King and Barudius from Space warrior, they both have the ability to fit together and have the ability to transform into aircraft chariots
Source: wike, 2023

Due to the challenge of Japanese robot animation, many robots with deformation function as the main selling point were born in the 1970s. Due to the limitation of early science and technology level, there were a lot of advanced design, which could not be realized with the technology at that time. Even now, due to the lack of strength of the plastic models, many deformation can only be achieved by replacement parts. Therefore, the deformation model can only be deformed locally, and then by replacing some parts.

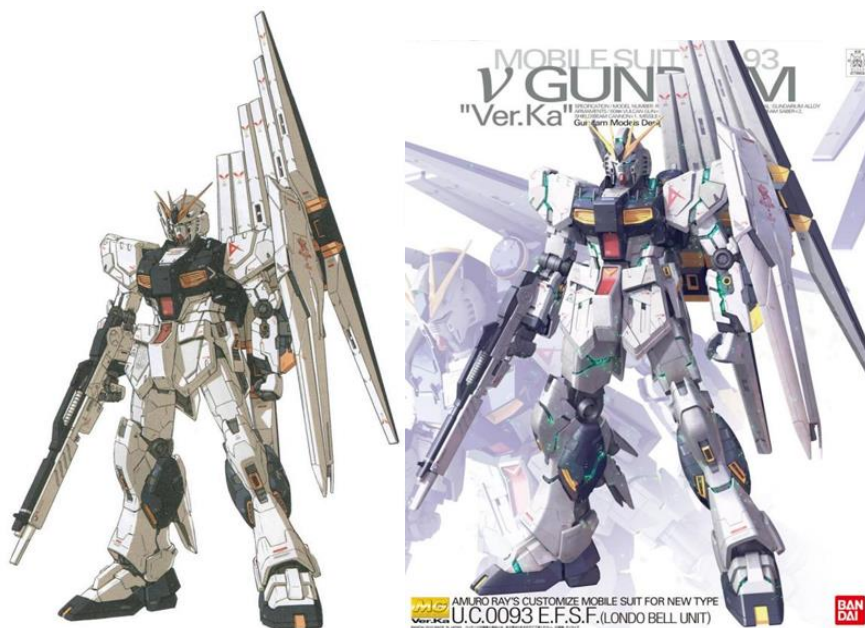


Figure 4. The mechanical setting of newgundam comes from the new "newgundam", which was born in 1988 and in 2014 by adding a lot of details and adding the deployment mechanism
Source: wike, 2023

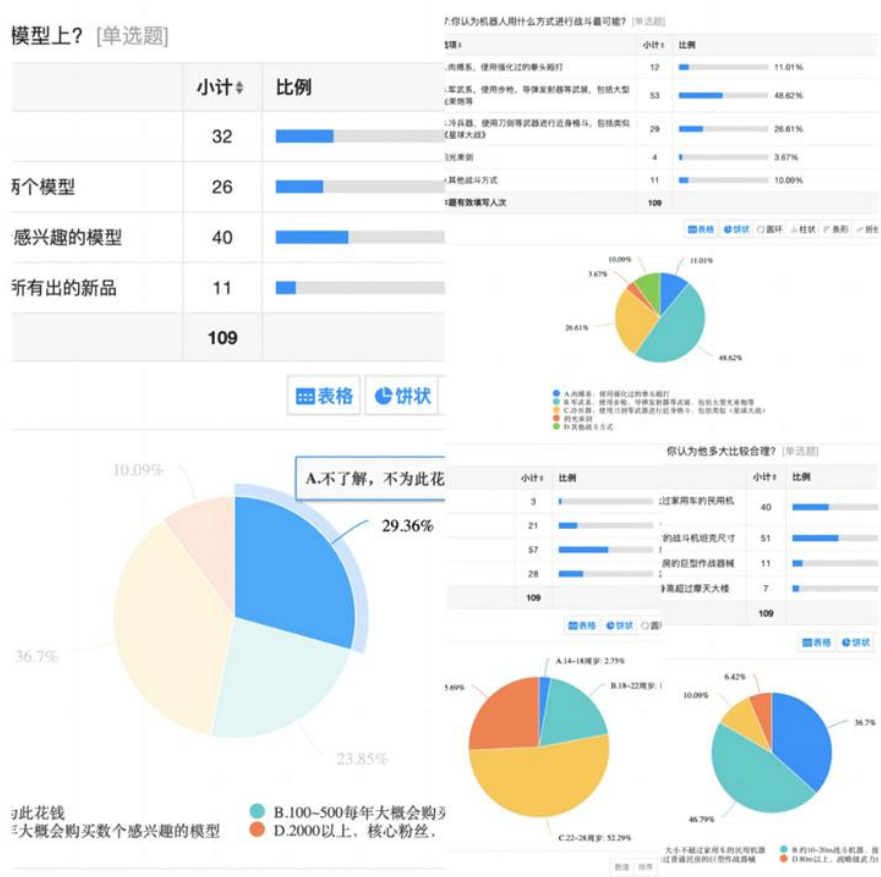


Figure 5. Part of the survey results chart, showing the results in the form of a pie chart
Source: Wang Chenyou, 2023

In market research stage, I through China's news agency software, WeChat on the 18 questions questionnaire, recycling the nearly 100 feedback, 18 questions, youdao titled market research, analysis of robot animation audience and whether they will pay for his interest, the other half for the art research class, if he is interested in the robot, so it will be specific interested in which kind of type of robot, is my key research object

Table 1: Part of the statistics of art and design direction, through which we can know the preferences of modern people

Questionnaire survey direction		Satisfaction level			
		The highest recognition	Secondary high recognition	Third recognition	Fourth recognition
1.	What color-matching robot do you prefer?	Mixed color system (40.37%)	Light-color system (27.52%)	Dark color system (19.27%)	Solid color system (12.84%)
2.	How do you think the robot is most likely to fight?	Guns (48.62%)	Close al weapon (30.28%)	Melee beats (11.01%)	Other (10.09%)
3.	What do you think is the energy source of super robots?	Nuclear power (36.7%)	Fiction Super Energy (25.69%)	Traditional energy sources (22.94%)	Other (14.68%)

Questionnaire survey direction		Satisfaction level			
		The highest recognition	Secondary high recognition	Third recognition	Fourth recognition
4.	What do you think how super robots operate?	Thinking operation (38.53%)	Rever (24.77%)	Other (19.27%)	Self-awareness (17.43%)

Source: Wang Chenyou, 2023

< 统计结果 ...

问4:以下的四个机器人, 更喜欢哪一个?(配图魔神Z, 真盖塔, 元祖高达, 独角兽高达) [单选题]

选项 #	小计 #	比例
A.	20	18.35%
B.	47	43.12%
C.	11	10.09%
D.	31	28.44%
本题有效填写人次	109	

饼状 圆环 柱状 条形 折线

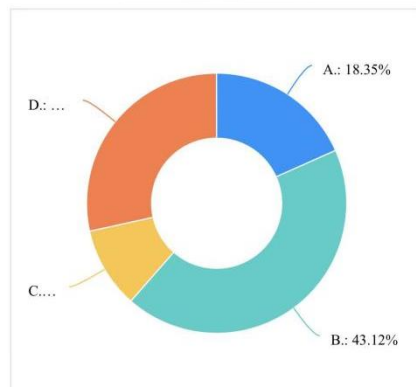


Figure 6. The survey results and the legend used are respectively A.Mazingerz, B.singata, C. The primary generation gundam, D. The Unicorn gundam

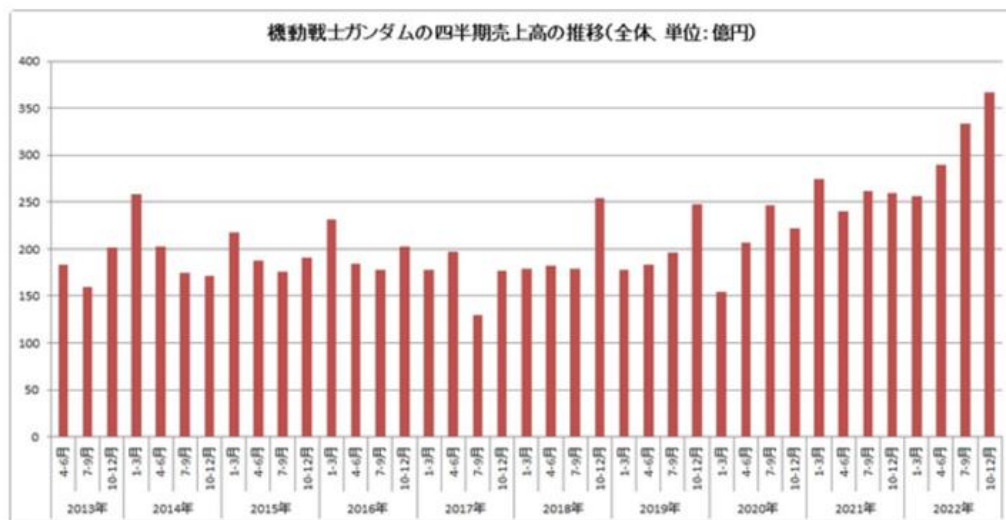
Source: Wang Chenyou, 2023

I added a topic to the topic of art instruction. I generally ignored the existing toy models, and put them into the topic to ask which one the subjects liked most based on their first impression. They are Mazingerz from Mazingerz Infinite, singata from singata-The Last Day of the World, unicorn gundam of Mobile fighter gundam UC, and original gundam of Mobile Suit gundam 0079. Mazingerz and Geeta robot are both super series, while unicorn gundam and gundam are both real series, and they are both different in emphasis.

Table 1: Part of the statistics of the market research direction, through which the value of the relevant market can be learned

Questionnaire survey direction		Satisfaction level			
		The highest recognition	Secondary high recognition	Third recognition	Fourth recognition
1.	How old are you??	22-28 (52.29%)	28+ (25.69%)	18-22 (19.27%)	14-18 (2.75%)
2.	Do you know anything about Super Robot Wars and related animation?	Fans (40.37%)	Unaware (27.52%)	Heard of this (22.02%)	Core fans (10.09%)
3.	How will you now learn about the robot-related surrounding products?	Magazine (41.28%)	Animation (27.52%)	Network community (19.27%)	Friend recommendation (11.93%)
4.	What makes a robot the most attractive to you?	Arms (55.05%)	Torso (30.28%)	Limbs (11.04%)	Head (3.67%)
5.	Which one of the following four robots, do you prefer?	Unicorn gundam (43.12%)	singata(28.44%)	Mazingerz (18.35%)	gundam (10.09%)

Source: Wang Chenyou, 2023



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Figure 7. As can be seen from the gundamIP revenue table released by the well-known toy model manufacturer Band, although the score in animation is always in a low state, the sales volume of the model has been rising

Source: wike, 2023

Although the Japanese animation industry and the entire Japanese economy are in a stage of contraction, the value of derivative products of robot animation is rising.

In 2022, the overall sales volume of Band was 1004146 billion yen (about 52 billion yuan), up 21.6% year on year, and the operating profit was 139.546 billion yen, up 34.33% year on year, achieving a significant increase in income.

There are many reasons that can be analyzed. One is that the children who grew up in the old century gradually became social people and had the economic strength to pay for their own interests and hobbies. Second, there is no new robot animation that can lead the era.

So it can be seen that my research is very valuable, and there is a very big prospect in this market.

CONCLUSION

The rise and fall of robot animation is closely linked to the background of The Times, and it reflects the evolution and demand of people's aesthetic standards.

Mazingerz As the initial era defines its color matching and standard modeling.

gundam As a development stage, it opens up the creative ideas and introduces the realistic elements to increase its authenticity.

gaogaigar As a peak stage, it integrates the advantages of various designs. The overall square design is close to the super system, and the details are more inclined to the real system.

People's aesthetic appreciation is constantly changing with the progress of The Times and the expansion of cognition. From what we have so far, people prefer to use stronger shapes, richer details and mechanical shapes with rich gameplay affirm

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