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How Can Animation Production Experience Cultivate Judgment Skills in the Era of AI-Powered Animation Production?

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Abstract: Drawing on practical experience in animation production, this paper examines the evolution of creative judgment capabilities in the context of AI technology application. It explores how insights gained from storyboarding, keyframe creation, shot composition, and post-production compositing influence creators' assessment of narrative pacing, character movement, visual space, and stylistic direction. The study further illustrates the practical application of such production expertise through three key aspects: identifying creative intentions, evaluating generated visuals, and refining shot selection and modifications. These insights aim to assist creators in detecting visual issues, making informed choices regarding production strategies, and ensuring that AI-generated outputs better align with the artistic expression requirements of animated works.

Keywords: AI animation production; Animation production experience; Creative judgment; Generative artificial intelligence; Artistic expression

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1. Introduction

The advancement of AI-generated technologies is transforming the workflow in animation production. AI tools are increasingly being integrated into key stages of creation—including character design, motion generation, and shot composition—enabling previously time-consuming processes involving iterative drawing and adjustments to be rapidly executed through intelligent generation. Given the vast array of possible generated outputs, creators must assess whether the visuals align with narrative requirements, whether character movements are plausible, and whether shot transitions feel natural. Creators familiar with traditional production workflows can often identify artistic challenges that AI-generated techniques cannot resolve, and then leverage their established expertise to propose appropriate revisions.

2. Changes in creative judgment capabilities in the era of AI animation production

2.1. Transition from traditional animation production to AI-generated content screening

Traditional animation production usually follows a relatively clear creative process, from the initial character design and storyboard drawing to the mid-stage action production and the final picture processing. Each stage requires the creator to invest a lot of time to complete the specific content. The intervention of AI generation technology has changed this working method. Creators can obtain multiple pictures with different expressive characteristics within a short period by inputting textual descriptions, referring to images, or specifying action requirements. However, the fact that AI can generate complete pictures does not mean that all these pictures are suitable for entering the animation work. Some results may have strong visual appeal but may differ from the established image of the character, and even have problems such as changes in action direction and inconsistent character proportions in consecutive shots. Creators need to distinguish which content has practical value based on the story background and the relationship between previous and subsequent shots, and judge the increase in objects, which requires the creator to have a clearer understanding of what the work needs.

2.2. Transition from specific technical operations to creative quality judgment

Animation production has a strong professional technical attribute. In the traditional working environment, creators need to master techniques such as character drawing, action patterns, perspective relationships, and shot movement to gradually achieve the expected visual effect. For example, the turning action of a character requires consideration of the transfer of the body's center of gravity, and the speed change of a character walking needs to be expressed through key poses and time intervals. These details were mainly dependent on the repeated drawing and correction by the production staff. With AI animation tools capable of undertaking some picture generation and action interpolation work, the time investment in some specific operations has decreased, but the creator's responsibility for judging the quality of the work has not thereby been reduced. At this time, being able to identify these problems is more indicative of the creator's professional level than simply completing technical operations. The quality judgment of the work is not independent of technical experience; those lacking experience in production may find it difficult to explain why the character movement appears stiff, and those unfamiliar with shot language may not easily detect spatial problems in the picture connection. AI technology has changed the execution mode of some production tasks, allowing technical capabilities to gradually extend from direct operation to the analysis, evaluation, and correction of generated results. Professional experience thus becomes an important basis for distinguishing the quality of animation art [1].

2.3. Transition from a single production plan to multiple creative choices

The selection of plans in animation creation is always influenced by production conditions. In the traditional production method, character design, scene design, and shot presentation usually require preliminary discussion to determine the basic direction, and after entering the formal production, significant modifications often mean that the existing work needs to be redone. The production team tends to work around the confirmed plan, even if there are other creative ideas, they may be difficult to fully try due to time and cost limitations. With AI generation technology, this situation has changed. The same story can try different visual styles, and the same character action can form multiple performance versions. Creators thus have greater space for comparing plans.

3. Animation production experience and its impact on creative judgment ability

3.1. Storyboarding design experience and its influence on narrative rhythm judgment ability

In actual production, storyboarding requires considering the sequence of information appearance, the duration of camera shots, and the relationship between characters' reactions and the development of the plot. Creators who have long participated in storyboard design are usually able to determine which content needs to be presented and which plot can be simply explained through camera cuts based on emotional turns in the story. For example, in an animation where a girl reunites with her long-lost father, AI can quickly generate a series of consecutive shots such as the girl hearing the knock on the door, walking towards the door, and opening to embrace her father. The picture content is complete, and creators with storyboard design experience will notice that the short pause after the girl hears the knock on the door is an important part of expressing the character's psychological activities. If the scene directly transitions to the opening of the door, the audience has not yet felt the girl's anticipation and hesitation, and the plot has already reached its climax. Therefore, creators can add a close-up of the girl's hand movements before she walks towards the door, extend the static scene before the door opening, and appropriately reduce the repetitive presentation after the reunion. Such modifications come from the creator's long-term understanding of narrative rhythm and also demonstrate the shaping effect of storyboard experience on judgment criteria. Through repeated handling of different types of storylines, creators can gradually break away from relying on the number of shots and the completeness of the picture, and instead focus on the actual role of each shot in the narrative [2].

3.2. Character animation production experience and its influence on character action judgment ability

The quality of character action representation directly affects the credibility of the animated characters. The requirements for character animation production are for creators to be familiar with the laws of human movement and to appropriately exaggerate the actions based on the character's personality and emotional state. A seemingly simple action like raising an arm actually includes details such as adjusting the body's center of gravity, shoulder movement, and arm motion. The speed and amplitude of the action will also change the emotional expression of the character. Suppose an animation needs to show an elderly character lifting a heavy wooden box, the AI-generated picture may already have complete actions such as bending over, grasping, and lifting, but the character's movement becomes too light when getting up, and the wooden box seems weightless. Therefore, when modifying the AI-generated content, it is appropriate to extend the preparatory action before the character's exertion, highlighting the process of leg support and body center of gravity shifting upward, and expressing the weight of the wooden box through the downward movement of the shoulder. Creators have developed the ability to judge the movement logic of characters through long-term observation, drawing, and correction of actions. Even when faced with a smoothly generated picture by technology, they can still distinguish whether it truly conforms to the character's characteristics and the needs of the plot.

3.3. Camera production experience and its influence on spatial judgment ability in pictures

The spatial relationship in animation shots needs to be established through composition, perspective, and camera movement. The audience can smoothly understand the position of the characters because the

directions, shot sizes, and spatial information of the preceding and following shots maintain necessary connections. In AI animation production, the perspective effect of a single shot may be reasonable, but the continuously generated shots may not be able to accurately maintain the spatial relationship of the same scene. For example, in an animation segment where a teenager runs through the school corridor and turns to enter the staircase, the AI-generated first shot shows the teenager running from the left side of the picture to the right, but the second shot suddenly sets the staircase entrance behind the character, and the character's movement direction also reverses. During the processing, retain the relatively stable shot with a consistent movement direction of the character, use the mid-shot at the turning point to explain the spatial change, and complete the scene transition through the local picture of the staircase entrance. Long-term contact with 3D scene construction, camera movement, and shot connection enables creators to actively infer the spatial structure behind the two-dimensional picture when observing it [3].

3.4. Post-production synthesis experience and its influence on visual style judgment ability

Post-production synthesis is an important part of forming a unified visual effect in animation works. The quality of the characters, background, lighting, and special effects, even when each is at a high production level, may still appear awkward when combined together due to improper color relationships or handling of picture layers. The experience in post-production synthesis enables the creator to gradually form the habit of viewing the entire picture, being able to notice the subtle differences between different visual elements. Taking the farewell scene at the rainy night station as an example, the character images generated by AI, the platform background, and the rain and fog effects may all have strong visual appeal. However, after synthesis, phenomena such as overly bright light on the character's face and inconsistency between the direction of rain reflection and the position of the light may occur. If only the clarity of the picture is considered, these problems may be overlooked. But creators with post-production synthesis experience will start from the environmental light source and emotional atmosphere, analyze whether there is a visual conflict between the elements, and through long-term layer synthesis, color correction, and lighting processing, the creator can transform the observation of local visual effects into a judgment of the overall style of the picture, and make choices that conform to the narrative emotions and visual expression requirements.

4. Practical application of animation production experience in AI creation judgments

4.1. Judgment of the creative intent of AI-generated schemes

When actually creating an AI-generated scheme, a brief "shot intention card" is established before inputting the prompt words, specifying the location where the plot occurs, the mental state of the characters at this moment, the information that the audience should obtain, and the setting where the shot must remain unchanged. For example, when depicting waiting, the key point could be whether it is the danger of the external environment or the gradual depression of the character's mood. These two intentions will lead to completely different shot arrangements. The creator can use an existing storyboard as a reference image, constrain the shot size, character orientation, and camera movement, and then let the AI output several clearly different versions. After the generation is completed, temporarily ignore the fine details of the picture and place the candidate shots in the context of the story, and judge whether the character's behavior,

environmental information, and emotional focus are consistent [4].

Take "A teenager waiting at the street corner late at night for his family" as an example. The set emotion shifts from anxiety to depression. Scheme A in **Figure 1** uses strong car lights and dynamic street scenes, which is likely to lead the plot to a tense chase; Scheme C, although it has a night atmosphere, has too much environmental information, and the character's situation is not as prominent as before; Scheme B uses a relatively stable camera position to retain the street space, which is more suitable for expressing the waiting through brief looks back, pauses, etc., of the characters. Creators with storyboard production experience can select Scheme B as the basic version, rewrite the character's line of sight, the degree of foreground interference, and the duration of the shot according to the generation requirements, and play this shot in a continuous manner with the action direction of the previous shot and the emotional change of the next shot. If necessary, generate a part of the scene without changing the overall composition direction of the entire scene, and choose to record "reason for retention" and "content that needs to be modified" to avoid subsequent teams overturning the already determined narrative arrangement just because the picture looks good.



Figure 1. Comparison of creative intentions for AI-generated solutions

4.2. Quality identification of AI-generated images

When identifying the quality of AI-generated images, the visual appeal of still frames and the actual usability of animations should be checked separately. Creators can first inspect whether the character's pose is stable, whether the props are missing, and whether the spatial perspective and light direction are correct at the original resolution. Then, they can put the materials into the editing timeline and check the start, contact, and end positions of the actions frame by frame. When encountering problems, it is not advisable to re-generate the entire image at once. Instead, they should first determine whether the defect occurs in the single-frame form, the action process, or the consistency across shots. For single-frame hand deformations, local re-drawing can usually be done. For missing key postures, action references or control frames need to be added. When a character repeatedly changes clothing, height, and facial features in consecutive shots, it is necessary to return to the unified character setting constraints.

Figure 2 takes the image of a character holding a water cup as an example. At first glance, the AI-generated result shows that the character's sitting posture and indoor lighting are complete. However, when zooming in on the moment of touching the water cup, it can be found that the fingers have not formed an effective grip, and the cup body has an unreasonable slide before reaching the table. Three critical moments of "finger touching the cup wall–stable grip–cup bottom off the table" should be captured. Using the same

composition reference frame to fix the cup opening size, palm position, and movement trajectory, local re-drawing or controlled re-generation should be done for the abnormal segments while keeping the character's face and background unchanged. The corrected check should be played at normal speed and at a slow speed once each to observe whether the cup body moves synchronously with the wrist and whether there are new flashes at the edge of the frame. The problem frame position, defect category, and correction result should be marked in the shot review record and submitted to the original drawing or compositing stage for review.

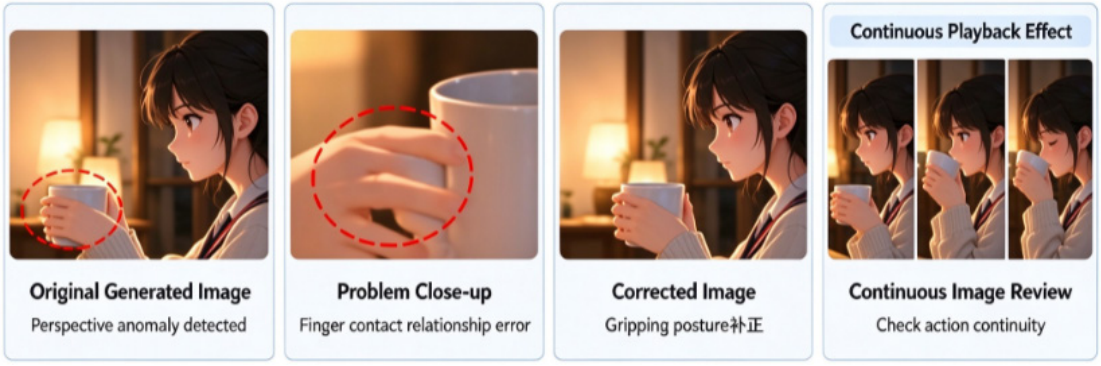


Figure 2. Quality assessment and correction of AI-generated images

4.3. Modification and selection of AI animation shots

After the AI shots enter the editing stage, the modification work should focus on the complete scene. The original shot numbering should be retained for each shot, and the generated version, the reference images used, and the time points where anomalies occur should be registered in the same shot list. During the initial review, first check if the narrative information is complete, then check the direction of movement, camera position relationship, and continuity of the characters, and finally adjust the color and local special effects. For materials with correct main character actions and only minor defects, priority should be given to using frame supplementation, local redrawing, or cropping. For shots with inappropriate camera movement but stable character images, it is possible to try re-designing the camera movement and retaining the existing actions. If the scene orientation, character identity, or key plot elements have fundamental deviations, a new generation should be created. The basis for judgment is whether the problem can be resolved and form a coherent paragraph with adjacent shots after the problem is fixed, rather than whether a single frame is aesthetically pleasing when viewed alone.

For example, in the scene of "a character pushing the door into the room," the original shot specified that the character should move from left to right in the frame. However, the AI-generated indoor shot placed the character on the opposite side, making it difficult for the audience to confirm the correspondence between the door and the room (see **Figure 3**). During the actual modification, mark the position of the door, the direction of the character's movement, and the side where the camera is located in the shot, and reset the indoor camera positions along the established movement axis. After the corrected version is placed back on the timeline, it should be reviewed in conjunction with the two to three preceding and following shots to observe whether the actions are continuous, whether the lines of sight are consistent, and whether the indoor space is clear. Write the adopted version, the reasons for deletion or modification, and the details that still need to be processed into the shot list, which will facilitate the later synthesis work based on the determined version.

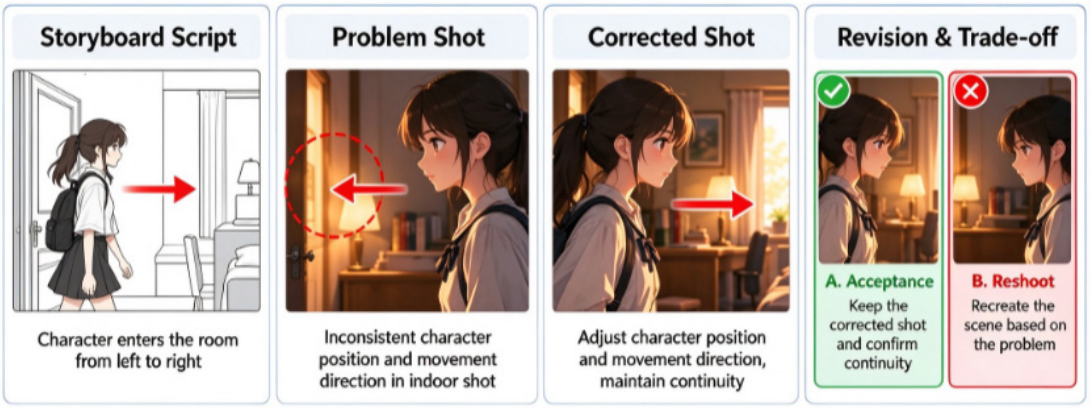


Figure 3. Modification and trade-offs in the spatial relationships of AI-generated animated shots

5. Conclusion

The AI-generated technology has provided more creative means for animation production, presenting creators with new challenges. The artistic quality, narrative rhythm, character movements, camera space, and visual style of animation works are closely related. The long-term accumulation of animation production experience enables creators to identify problems in specific scenes, understand the impact of different expression methods on the emotional and narrative effects of the work, and make reasonable choices for AI-generated solutions. With the continuous development of AI technology, animation creators need to attach importance to the accumulation of traditional production experience. While familiarizing themselves with technical tools, they should also maintain independent artistic judgment, so that AI can truly serve the content expression and artistic creation of animation works.

Disclosure statement

The author declares no conflict of interest.

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