



Character Movement Design to Depict Joy and Fear in 2D Short Animated Film Weeping Wings

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Abstract. This study focuses on the design of character movements in the 2D animated short film Weeping Wings to portray emotions of joy and fear through a nonverbal visual approach. The background of this research stems from the social issue of sexual harassment, which is presented without dialogue, making facial expressions and body gestures the primary means of communication. The purpose of this research is to design the movements of the main character to represent emotions in an expressive and communicative manner, while also emphasizing the importance of nonverbal animation in conveying emotional messages to the audience. The methods employed include the study of facial expressions, emotions, and body gestures, along with the application of three animation principles: Anticipation, Exaggeration, and Secondary Action. This process is supported by reference observation, acting exploration, and the implementation of digital cut-out animation techniques using Toon Boom Harmony software. The findings indicate that the application of animation principles combined with theories of emotion, facial expression, and body gesture successfully creates realistic, expressive, and communicative character movements. The scenes in which Rara feels happy and afraid demonstrate clear differences in expressions and body language, effectively strengthening message delivery. These findings affirm that designing character movements through a nonverbal approach can enhance the audience's emotional experience of the story, while also highlighting the significant role of animation as a medium of visual communication in addressing social issues.

Keywords: 2D Animation, Character Movement, Facial Expression, Emotion, Body Gesture.

1 INTRODUCTION

Sexual harassment is a social issue that continues to affect individuals across gender and age groups. In 2022, there were 27,589 recorded cases, with 4,634 male victims and 25,050 female victims. This shows that the number of female victims is significantly higher than that of males. Individuals aged 16–29 are the socio-demographic group most vulnerable to the negative impacts of sexual harassment. The effects of

sexual harassment can cause adolescents to experience suffering, emotional disturbances, depression, loss of appetite, difficulty sleeping, decreased academic performance, and even self-harming behavior (Ardiansyah et al., 2023).

The author conveys this concern through the medium of animation. Animation is an effective artistic medium for delivering stories with emotional depth and strong social messages. In animated films, non-verbal communication such as visual body language plays an important role, especially in narratives that do not use dialogue. According to Sibierska (2017, as cited in Sabri & Adiprabowo, 2022), visual imagery has the ability to convey messages without words and encourages viewers to understand or interpret what is being shown. Body language can visually depict a character's emotions, strengthen the emotional connection between the character and the audience, and provide deeper dimensions to the story.

Weeping Wings tells the story of Rara, a young female butterfly who has just emerged from her cocoon. Feeling hungry, Rara begins searching for food, but during her search, she encounters two dragonflies who disturb her and attempt to damage her beautiful wings.

The author serves not only as a researcher but also as an animator responsible for designing the character movements. The characters in the film are animated according to the emotions they feel, expressed through body language so the audience can understand them. Therefore, this research is expected to contribute to the field of animation and expand our understanding of how visual media can be used to deliver social messages relevant to today's social context.

Based on these considerations, the research addresses the following main problem: How can character movement be designed to visually depict the emotions of joy and fear in the 2D animated short film *Weeping Wings*? To maintain focus, the study specifically analyzes the main character Rara a female butterfly and limits its exploration to the visual aspects of body gestures and facial expressions at moments where joy (scene 1 shot 5) and fear (scene 4 shot 75) are presented. Other characters, emotions, or narrative elements beyond these moments are not included within the scope of this research. The purpose of this study is to design character movements that convey the emotions of joy and fear, including facial expressions and body gestures, by focusing on the animation principles of anticipation, exaggeration, and secondary action in the 2D animated short film *Weeping Wings*.

2 METHODOLOGY

This research is conducted using qualitative methods, employs a practice-based research approach that integrates theoretical analysis with the creative production of character animation. The primary objective is to design character movements that effectively depict the emotions of joy and fear through facial expressions and body gestures in the 2D animated short film *Weeping Wings*. The methodology combines theoretical exploration, observational study, visual experimentation, and animation production.

The practice-based research method is well-suited to this study because the creation of animated character movement is both analytical and artistic. In this approach, the

researcher simultaneously acts as the creator, and animator, enabling direct involvement in the exploration, evaluation, and refinement of the movement design.

Data for this research were collected through literature review, visual observation, and acting reference recording. The literature review covered the principles of animation, especially anticipation, exaggeration, and secondary action along with theories of emotion, facial expression (FACS), and body gesture. Visual references from animated and live-action works were examined to understand gesture patterns, posture, face, and emotional staging relevant to joyful and fearful expressions. Additionally, the researcher produced acting reference videos to capture natural physical cues, including facial muscle behavior, body tension, timing, and movement dynamics.

The creative production process involved analyzing the film's script and selecting two emotionally significant shots: Scene 1 Shot 5, which depicts joy, and Scene 4 Shot 75, which represents fear. These scenes were developed through storyboard and animatic review to determine clear staging and timing. The main character, Rara, was animated using a 2D digital cut-out created in Toon Boom Harmony. Multiple refinement passes were conducted to enhance timing, smooth motion, and increase emotional readability.

3 RESULT

The following are the results of the character movement design for Rara, created by implementing several theories to depict the emotion of joy in Scene 1 Shot 5, and the emotion of fear in Scene 4 Shot 75 (see Fig. 1).



Fig. 1. Final result of Scene 1 Shot 5. (Source: Personal documentation, 2025).

Based on theories of emotion, joy typically arises from positive social interactions or pleasant sensory experiences in this case, after Rara undergoes metamorphosis and feels delighted by the beauty of her wings. Fear, on the other hand, emerges as a response to threatening or dangerous situations, whether physical, emotional, psychological, real,

or imagined. This is reflected in Rara's reaction when she faces danger after being harassed by the two dragonflies (see Fig. 2).



Fig. 2. Final result of Scene 4 Shot 75 (Source: Personal documentation, 2025).

In the animated film *Weeping Wings*, which is a non-dialogue animation, character movement becomes a crucial element for conveying the story as well as the emotions experienced by the characters to the audience.

4 DISCUSSION

4.1 Scene 1 Shot 5

Rara reflects a feeling of joy toward her wings, which is visualized through her facial expression and body gestures (see Fig. 1). Her shoulders are raised with both arms spread open, her antennae lifted upward, and her head tilted back. Rara's facial expression is depicted through sparkling eyes focused on her wings, accompanied by a smile, which enhances the depth and liveliness of the joy she experiences.

In this scene, Rara expresses joy with her arms open and her shoulders lifted upward. This gesture is similar to Shizuka from the animated film *Doraemon*, although there is a difference in body posture that influences the subsequent action. Shizuka leans slightly forward while maintaining balance, whereas Rara leans backward, causing her to almost fall. Despite this difference, both characters successfully represent a joyful emotion through their gestures in response to the situations they experience.

Several of these aspects align with the explanations of Noroozi et al. (2024) and Calvo et al. (2015). The present study applies to both perspectives, which complement one another. Joyful gestures can be expressed through open arm positions, while joyful facial expressions may be shown through a backward head tilt, a neutral chest position, and raised shoulders.

Rara's joy is conveyed through her open-mouthed smile, lifted cheeks, and focused gaze directed at her wings as the source of happiness. This expression is comparable to Jibril in *No Game No Life*, who similarly displays joy through a wide smile and concentrated gaze on an object of interest. A live-action comparison can be seen in Hiromi from *I Am a Hero*, whose bright smile and directed attention toward another person also communicate happiness. Although their gestures and contexts differ, all three charac-

ters effectively express joy through facial expressions and gaze, emphasizing the importance of visual focus in reinforcing emotional clarity and audience understanding.

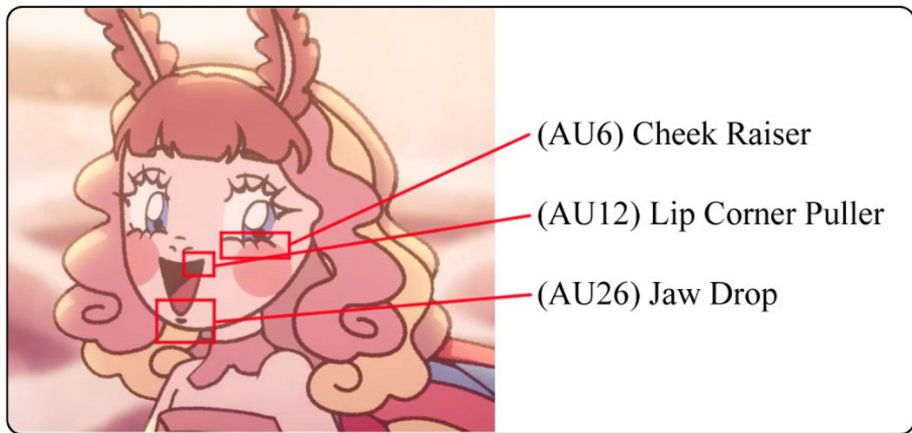


Fig. 3. Analysis of Rara's joy expression using FACS (Source: Personal documentation, 2025).

The joyful expression displayed on Rara's face is constructed based on the use of Action Units (AU) within the FACS (Facial Action Coding System) (see Fig. 3). Although this system was originally developed to map facial movements that occur as emotional responses, it is highly effective for creating expressive animation. According to FACS mapping, an expressive joy emotion involves three key AUs: AU6, influenced by the *orbicularis oculi* muscle, which raises the cheeks and narrows the eyes; AU12, influenced by the *zygomatic major* muscle, which pulls the lips into a smile; and AU26, influenced by the *masseter* and *pterygoid* muscles, which lowers the jaw and opens the mouth.



Anticipation



Exaggeration + Secondary Action

Fig. 4. Analysis of animation principles in Scene 1, Shot 5 (Source: Personal documentation, 2025).

The principles of anticipation, exaggeration, and secondary action are used to enhance Rara's joyful expression (see Fig. 4). Anticipation appears as she lowers her head and closes her eyes before standing, creating a natural cue for her movement. Exaggeration emphasizes her happiness through enlarged eyes, a wide smile, and shimmering eye effects, while secondary actions such as open arms, raised wings, lifted antennae, and sparkling eyes strengthen the expressiveness and make her joy more vivid and convincing.

4.2 Scene 4 Shot 75

In this scene, Rara responds to her fear by hiding. The emotion of fear is depicted through her body leaning against the ruined pillar, while her open arms indicate that she feels cornered by the situation. Her heavy breathing suggests an increased heart

rate, accompanied by widened eyes and an open mouth. However, Rara also displays fear combined with alertness, shown when she turns her head toward the source of danger from behind the pillar to check her surroundings and ensure her safety.

Rara's fearful reaction as she hides behind the pillar in Scene 4, Shot 75, appears similar to a scene in the animated series *Amphibia*, where Anne hides behind a tree trunk. Although the scenes share similarities, they also differ in several aspects. When experiencing fear, both characters lean against an object behind them; however, their body positions differ. Anne is seated, while Rara remains standing, though both maintain an upright posture. In addition, both characters extend their arms outward, indicating that they feel cornered by something. Nevertheless, Anne uses one arm to tightly hold and cover her friend's mouth, whereas Rara does not. Both characters also display fear combined with alertness, turning their heads toward the source of danger that frightens them.

The author applies a combination of two perspectives from Nooroozi et al. (2024) and Calvo et al. (2015). According to Nooroozi et al. (2024), fear is characterized by an increased heart rate, restless body movements, and body language that reflects a state of alertness or vigilance. Meanwhile, Calvo et al. (2015) explain that fear involves an upright torso and arms extended outward to the sides. These two theories complement one another, resulting in a more comprehensive and meaningful design of gestures in the animation.

Facial expressions play a key role in conveying fear through features such as sideways-pulled lips, an open jaw, raised eyelids, widened yet slightly squinted eyes, and curved eyebrows. This is comparable to Hilda from *Hilda*, who displays similar expressions, showing how fear can be universally recognized through shared visual cues. A live-action example appears in Ichika from *Kami-sama no Iu Tōri*, whose expression combined with tense body gestures like hands pressed to the floor emphasizes her fear and sense of being cornered. Although the intensity differs, these characters share consistent visual elements that effectively communicate fear to the audience.

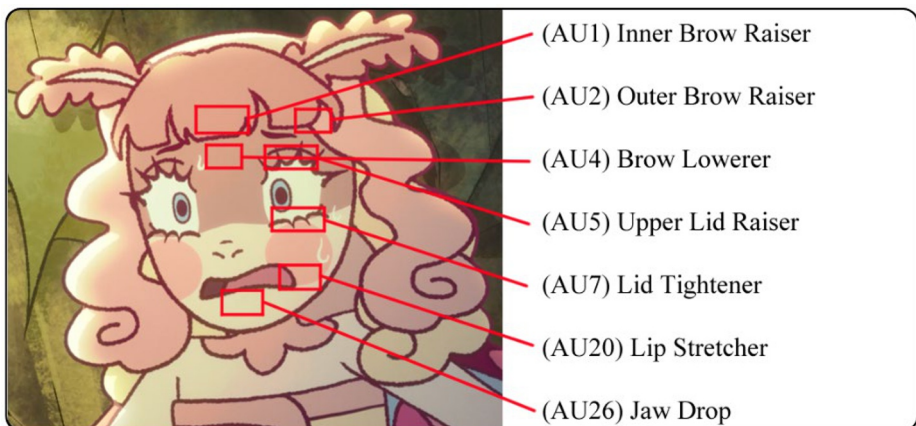


Fig. 5. Analysis of Rara's fear expression using FACS (Source: Personal documentation, 2025).

Rara's fearful facial expression is also constructed using Action Units (AUs) from the FACS (Facial Action Coding System) (see Fig. 5). According to FACS mapping, the emotion of fear involves seven key AUs. AU1, influenced by the *pars medialis* muscle, raises the inner part of the eyebrows; AU2, influenced by the *pars lateralis*, raises the outer part of the eyebrows; AU4, driven by the *corrugator supercilii* muscle, lowers the eyebrows and creates forehead wrinkling; AU5, influenced by the *levator palpebrae superioris*, raises the upper eyelids, making the eyes appear wider; AU7, driven by the *orbicularis oculi*, causes the eyes to squint due to tension; AU20, influenced by the *risorius* muscle, pulls the lips sideways; and AU26, influenced by the *masseter* and *pterygoid* muscles, lowers the jaw, resulting in an open mouth.

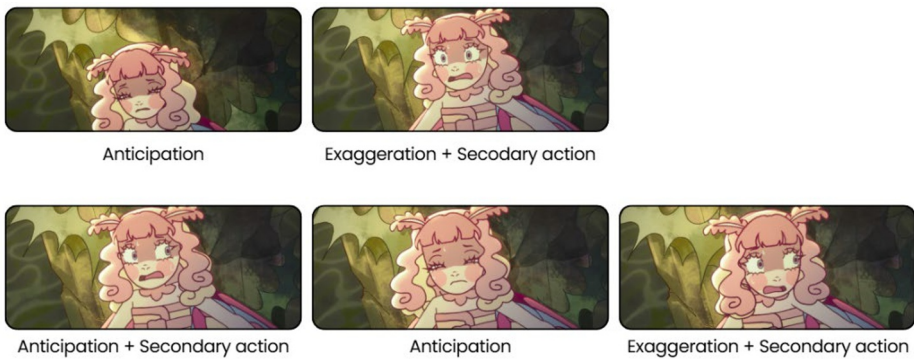


Fig. 6. Analysis of animation principles in Scene 4 Shot 75. (Source: Personal documentation, 2025).

The principles of anticipation, exaggeration, and secondary action are applied to enhance Rara's fearful expression (see Fig. 6). Anticipation is shown through preparatory movements such as closing her eyes, lowering her head, and glancing sideways before turning, creating a more natural and realistic motion. Exaggeration intensifies her fear through enlarged eyes and a widened mouth, while secondary actions such as heavy breathing, lowered antennae, sweating, and head movements reinforce her fear and heightened alertness.

5 CONCLUSION

The design of character movements to portray the emotions of joy and fear in the 2D animated short film *Weeping Wings* is achieved through a non-verbal visual approach that integrates theories of animation, emotion, facial expression, and body gesture. The main character, Rara, was developed in depth based on three-dimensional character building, supported by observations from various references and acting reference videos to create movements that align with her emotional state.

In Scene 1 Shot 5, Rara feels joy upon discovering her beautiful wings through a wide smile, sparkling eyes, and open, raised gestures represent the happiness she experiences. The principles of anticipation, exaggeration, and secondary action enhance her emotional clarity by preparing the movement, intensifying the expression, and adding supporting motion to emphasize her happiness.

These theories are also applied in Scene 4 Shot 75, depicting Rara's fear as she hides from dragonflies who intend to damage her wings. Her facial expression conveys fear through widened eyes, while her body gesture shows a tense posture leaning against a pillar with arms spread out, accompanied by restless movements indicating fear and a sense of being cornered. Anticipation prepares her actions; exaggeration intensifies her fear, and secondary actions such as heavy breathing, sweating, and alert movements enhance the sense of anxiety and vigilance.

Thus, the design of character movements successfully conveys the emotions of joy and fear in an expressive and communicative non-verbal manner. The effective use and combination of relevant theories in creating animated character movements result in actions that appear accurate and realistic, thereby enhancing the audience's emotional experience of the story.

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