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### The Uses and Abuses of Cartoon Style in Animation

#### Introduction

“Cartoon style” in animation broadly refers to animation design and movement that adheres to the 12 Principles of Animation, defined and developed at the Disney Studios. The Principles evolved through trial and error, by observing motion on-screen and noting what aspects of animated movement served the believability of the characters. To this day, the 12 Principles of Animation are known by all animators and used as a benchmark for good animation. Yet, these principles are not complete movement concepts. They influence specific movement patterns that are often applied without consideration of their effects, resulting in characterization that lacks authenticity.

Viewers have come to expect that animated character performances portray the illusion of a living being. As a determining factor for believability in animation, authenticity functions on two levels. First, we suspend our disbelief and engage with the character; there is no question of the character’s aliveness. Second, through characterization, we experience an authentic being whose inner intent is communicated outwardly, and made unmistakably clear.

Originating from the roots of 20th century modern dance, Laban Movement Analysis (LMA) is a conceptual framework for the observation, description and interpretation of human movement that offers a robust movement vocabulary. Where Animation Principles can potentially impose a specific style of animated movement, LMA is style-neutral and therefore excels at articulating components of style. Additionally, LMA addresses the relationship of intent to action, an innovative feature that aids us in the observation of authenticity which the Animation Principles lack.

This paper has a three-fold objective:

- 1) To observe how cartoon style animation imposes limitations on what animators create and how they express through movement within the genre.
- 2) To demonstrate that LMA is a useful methodology towards understanding the impact that cartoon style has made on animation.
- 3) To introduce the terminology of LMA so that it can be referenced and applied to the creation and discussion of animation by artists and theorists.

To achieve these goals, the paper begins with a definition of criteria for authenticity in animation. Disney and LMA-based terminology are introduced to define a vocabulary for the discussion of animated movement. Cartoon style is outlined through its progression from Disney through Hanna Barbera, and the influence of contemporary commercial production practices. LMA is used to dissect cartoon style, reduce it to its bare essentials and articulate its purpose. This becomes the basis for a critique of the various ways that cartoon style is employed, for better or for worse, in contemporary animation.

The methodology of Laban Movement Analysis is essentially to observe movement, describe it in terms of LMA parameters and make meaning from our observations. This paper emphasizes an introduction of the terminology of LMA (indicated with bold lettering), while I employ the methodology of observation, description and interpretation throughout, by example.

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### Authenticity

The Iron Giant and Hogarth are seated on a woodland floor having their first conversation. Holding a rock with outstretched arms, Hogarth inclines his body forwards and upwards as he lifts the rock for the giant to see, and explains, “This is a ROCK!” The Giant repeats, “ROCK,” with a forwards and upwards inclination of his head that seems to say, “Now I know what this is.” Next he learns to differentiate between a rock and a tree. He lowers and raises the rock in his left hand, as if to sense its weight and confirm what he knows: ROCK. With head inclined towards a tree held in his right hand, he extends his arm sideways and upwards, then rises and retreats through the upper torso, head and neck as he proclaims, “TREE!”

The Iron Giant is a character that engages the audience through a quality of *authenticity*. Fundamentally, we believe in this character because all elements of the animated illusion are unified, promoting the suspension of disbelief, as animation viewers have come to expect. We *empathize* with the character because the dramatic context engages our emotions; Hogarth has saved the Giant’s life, and as they begin to communicate and establish a friendship, we sense the Giant’s vulnerability and dependency on Hogarth. Beyond these key ingredients, we experience the authenticity of the character through his movement, which integrates a matrix of qualities that presents a statement the character feels with his whole body. It is a moment of full commitment to what he is expressing.

In the film *Robots* (2005), the character Ratchet exhibits dramatically readable movement, yet this character does not appear authentic. We first meet Ratchet in a scene where he is asserting his power over employees who are still loyal to the company’s previous leader. He is a dark, negative and controlling character, yet the broad spatial range of his gestures and sudden, forceful transitions from one extreme to another give the impression that the animator has taken the movement far beyond the qualities imbued by the vocal actor—creating a character that is *out* of control. At one point during his speech to the employees, Ratchet does a short “dance” in which he is imitating what he perceives as childlike, whiny behavior, using a squeaky voice and shaking his hips back and forth with elbows flexed close to his ribcage and hands dangling limply. These movement qualities are highly inconsistent with what we have seen so far. Furthermore, the repetitive rhythm of his movement phrases is quite similar to the movement of other characters throughout the film. With all of these factors combined, Ratchet’s dialogue says one thing, but his movement says something else. A style of movement has been used without attention to its appropriateness for this character.

For the following discussion of cartoon style, this notion of authenticity in character animation encompasses the following criteria:

- In the context of craft, congruence of design with expression: when line, shape, form, color, composition, voice acting and movement are aligned with content, forming a fluid and meaningful whole.
- In the context of characterization, congruence between a character’s intent and its resulting action.
- Alignment of style with content, as opposed to adoption of style without connecting it to its subject.

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### **On Defining Cartoon Style**

It is problematic, yet necessary, to attempt a definition of cartoon style in order to proceed with a discussion of it. The problem lies in the need to elaborate on animation's early origins, and the evolution of subject matter and production methods, which could be the subject of its own paper. Therefore, rather than a definition, I put forward the following description of the type of work I am referring to as cartoon style:

- Animated movement that adheres to the Principles of Animation, which is most fully realized through hand-drawn animation methods.
- Depiction of characters in some dramatic context, where the intent is to promote believable character performances.
- Comedic as opposed to expressionistic content.

Non-drawn animation is typically referred to by its production method (puppet, 3D computer), and is said to have “cartoony” movement, but not referred to as a “cartoon” per se. Where puppet, 3D computer or other animation methods employ Principles of Animation, it is generally considered that they are emulating the “cartooniness” of hand-drawn animation.

### **Principles of Animation**

The evolution of animated movement at the Disney studio during the 1930's is pivotal to the formalization of cartoon movement parameters. During this era, a core team of animators began to experiment with animated movement. As reported by Frank Thomas and Ollie Johnston in *The Illusion of Life: Disney Animation* (1981), Walt Disney pushed the animators to develop their skills and create a more physically believable animated world. Gradually, a terminology, or language of animated movement evolved, which became known as the Principles of Animation (pp.45-47). As these precepts are widely known and can be referenced in *The Illusion of Life: Disney Animation*, I will list them here and apply them in context throughout this paper:

1. Squash and Stretch
2. Anticipation
3. Staging
4. Straight Ahead Action and Pose to Pose
5. Follow Through and Overlapping Action
6. Slow In and Slow Out
7. Arcs
8. Secondary Action
9. Timing
10. Exaggeration
11. Solid Drawing
12. Appeal

Through action analysis classes held on-site, the Disney animators scrutinized live-action footage frame by frame and honed their craft. A richly detailed, full animation style evolved that promoted the physical properties of objects and characters in motion as the basis for believability.

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The goal was to bring drawings to life and create believable characters through realistic characterization and acting. While the Principles of Animation can be applied to non-character movement, they are specifically geared to support the illusion of life. Note that as soon as you move an inanimate object with Anticipation or Squash and Stretch, it acquires characteristics of motivation and intent!

In recent years, several people have theorized additional Principles of Animation in an attempt to reflect continued developments in animation practice, as well as the limitations of the original twelve (Kerlow, 2004) (Comet, 2007). Walt Stanchfield taught life drawing classes for animators from 1970-1990. He is well known for his expanded 28 Principles of Animation which have been published informally on the internet (Animation Meat, 2007). While worth noting in the context of this paper, for the sake of simplicity I will save a discussion of these extended principles for another study.

### Laban Movement Analysis

While the Disney animators were defining Animation Principles and conducting frame-by-frame action analysis, Rudolf Laban was giving birth to expressionist dance in Europe, developing Labanotation, a notation system for human movement, and planting the seeds for what has today evolved into Laban Movement Analysis (LMA). Laban intuitively understood aspects of the body/mind connection that have become hot topics among cognitive scientists, somatic practitioners, psychoanalysts, athletes, dancers and actors alike. Together with his students and collaborators, he was able to distill the ingredients that are part of all movement patterns, formulating a rich and robust movement language that has withstood the rigors of broad applicability. LMA is a language that applies to all living beings, which, for our purposes, certainly includes animated characters.

LMA provides a conceptual framework through which we can observe, describe and interpret the intentionality of movement. It possesses one key attribute that the Animation Principles are without – the link between how people move and what their movement communicates to others. The following broad introduction to LMA, and its correlations with Animation Principles, will support my application of LMA concepts to further the discussion of cartoon style.

Five categories of movement delineate the full spectrum of LMA's movement parameters: **Body, Effort, Shape, Space** and **Phrasing**. Phrasing describes how we sequence and layer the components of movement over time. A movement phrase is analogous to a verbal sentence, or to a phrase of music, in which a complete idea or theme is represented. A phrase unit involves three main stages: **Preparation, Action** and **Recuperation**. Our uniqueness is expressed through our movement phrases: individualized rhythmic patterns and preferences of Body, Effort, Shape and Space. How one initiates a phrase of movement organizes intent and patterns the neuromuscular coordination of the action (Hackney, 1998).

We can use the language of Phrasing to describe a typical cartoon movement: the "take," which is a moment of extreme surprise. The character, having seen and taken in the thing that causes surprise, Prepares by slightly rising up before Squashing down and Stretching upwards into an extreme pose. This extreme pose constitutes the main action of the phrase, showing his reaction to the stimulus. As the pose is held, Secondary Action of hair or clothing may continue to move along the upward trajectory with Follow Through and Overlapping action. The character then releases the pose, sinking into a Recuperative moment of Squash before returning to neutral and preparing for the next decision to act.

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The **Body** category describes structural aspects of the body in motion: which parts are moving or held, how movement flows from one part to the next (which is the essence of Follow Through and Overlapping), how the kinetic chains of the body are being patterned and coordinated, and postural habits from which gestural expression emerges<sup>1</sup>. While this category has a focus on functional, or biomechanical aspects of movement, its parameters help us observe the degree of ease within the body and the ways in which the body serves authentic expression as the vehicle of its outward manifestation.

The **Effort** category has become the most widely known aspect of LMA due to its extensive practice within theater. Effort delineates qualities of movement as ongoing fluctuations between **Light** and **Strong Weight**, **Indirect** or **Direct Space**, **Sustained** or **Sudden Time**, and **Free** or **Bound Flow**. The four Effort Factors of Weight, Space, Time and Flow are linked with C. G. Jung’s four ego functions: sensing, thinking, intuiting and feeling. From these associations, we observe that a mover’s Flow of Weight in Space and Time communicates information about physical sensations and the agency to mobilize one’s weight with delicacy or force, the broadness or focus of thought, the intuitive leisureliness or urgency of decisions, and the release or control of feelings (Bloom, 2006). The eight Effort qualities emerge in combinations of two elements, forming “states,” three elements, creating “drives,” and in the rare case of an extreme and compelling movement, four elements combine in a “full Effort action.”

|        |  |
|--------|--|
| FLOW   | Feeling, Progression, “How”<br>Feeling for how movement progresses <ul style="list-style-type: none"> <li>• Free: external releasing of energy, going with the flow</li> <li>• Bound: contained and inward, resisting the flow</li> </ul>  |
| WEIGHT | Sensing, Intention, “What”<br>How you sense and adjust to pulls of gravity <ul style="list-style-type: none"> <li>• Light: delicate, sensitive, buoyant, easy intention</li> <li>• Strong: bold, forceful, powerful, determined intention</li> <li>• Weight Sensing: <u>sensing</u> the weight of your body, as opposed to <u>using</u> it.</li> <li>• Passive Weight – surrendering to gravity               <ul style="list-style-type: none"> <li>• Limp: weak, wilting, flaccid</li> <li>• Heavy: collapse, giving up</li> </ul> </li> </ul> |
| SPACE  | Thinking, Attention, “Where”<br>Thinking, or attention to spatial orientation <ul style="list-style-type: none"> <li>• Indirect: flexibility of the joints, three-dimensionality of space, all-around awareness</li> <li>• Direct: linear actions, focused and specific, attention to a singular spatial possibility</li> </ul>  |
| TIME   | Intuition, Decision, “When”<br>Intuitive decisions concerning <u>when</u> <ul style="list-style-type: none"> <li>• Sustained: continuous, lingering, indulging in time, leisurely</li> <li>• Sudden: unexpected, isolated, surprising, urgent</li> </ul>   |

*Table 1: Effort*

Of particular importance for animation, LMA delineates three more Weight parameters: the sensing of one’s body weight (a feature of the double-bounce walk), and the Passive Weight components of Limp and Heavy. Weight is a term that is constantly bandied about when

<sup>1</sup> Preston Blair articulates “line of action” as key to creating strong poses that support action (Blair, 1994). This is similar to the concept of Posture Gesture Merging, in which intent appears to be expressed with authenticity (Moore, 2005).

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discussing animation, because the illusion of the qualities of weight provides information about the materiality of form in motion. Materiality is intricately bound with intent because the motivation to move and act requires us to mobilize our body mass in constant negotiation with the affects of gravity. You may recognize this negotiation in the difference between the struggle to rise up out of bed in the morning, verses the way you feel on the tennis court later that day as you swing your signature serve!

It is typical for a definition of Squash and Stretch to include mention of weight, stating that Squash and Stretch movement gives weight to objects. This is a limited view of both Squash and Stretch, and of weight. The only time this occurs is when an object or character moves upwards, against gravity, or downwards, when yielding to gravity. Both weight and Squash and Stretch movement can exist independently of each other.

**Shape** is the one area of LMA that has the most in common with animation as it describes the process of shape change over time. Shape reveals how one's inner attitude and relationship with the external environment molds the changing plastic form of the body. Shape change may initiate as an adjustment of the body in relationship to self (just as Squash and Stretch represents the shifting of inner volumes), or as a bridge from self to other through **Arc-like** (pitching a baseball), **Spoke-like** (punching a punching bag) or **Carving** (molding a clay pot) Modes of Shape Change.

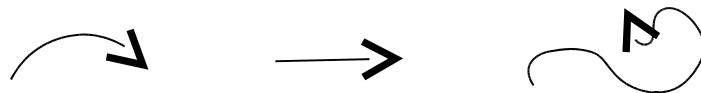


Figure 1: Arc-like, Spoke-like and Carving Modes of Shape Change

Laban and his collaborators observed that the eight Shape qualities of **Rising, Sinking, Spreading, Enclosing, Advancing, Retreating, Scattering** and **Gathering** are frequently clustered with corresponding Efforts, such as rising with Light Weight, or sinking with Strong Weight.



| UNIPOLAR                |                                | BIPOLAR               |                      |                       |                      |
|-------------------------|--------------------------------|-----------------------|----------------------|-----------------------|----------------------|
|                         |                                |                       |                      |                       |                      |
| SPREADING TO SIDES      | ENCLOSING SIDES TOWARDS CENTER | GROWING TO RIGHT SIDE | GROWING TO LEFT SIDE | SHRINKING LEFT SIDE   | SHRINKING RIGHT SIDE |
|                         |                                |                       |                      |                       |                      |
| LENGTHENING UP AND DOWN | SHORTENING UP AND DOWN         | LENGTHENING UPWARDS   | SHORTENING UPWARDS   | LENGTHENING DOWNWARDS | SHORTENING DOWNWARDS |

Figure 2: KMP variations of left/right and up/down Shape Flow

These Effort/Shape “affinities” represent natural or accessible clusterings of Effort and Shape, yet counter-affinities (such as forcefully punching a fist upwards, or delicately lowering a kitten to the ground) bring texture and richness to the expressive range of movement choices.

The interplay of Flow and Shape forms the basis of elasticity we can observe in subtle shape changes in the torso. With our breath, we respond to inner feelings of comfort/safety or discomfort/danger. The resulting fluctuations of tension and release allow the torso to grow and shrink three-dimensionally. The Kestenberg Movement Profile (KMP) is an application of LMA theory that has particular relevance for animation. Based on the observation of qualities of elasticity in infants, the KMP articulates 18 variations of how the flow of breath supports plastic shape adjustments. It can be viewed as an expanded theory of Squash and Stretch! (Kestenberg, 1977)

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**Space** describes the mover's involvement in the three-dimensional external environment, creating spatial pulls and countertensions that stabilize or mobilize the body. The range of movement varies within the **Kinesphere**, which is the

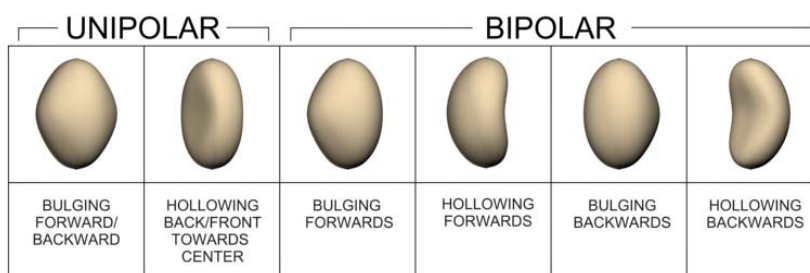


Figure 3: KMP variations of front/back Shape Flow viewed from slight angle

reach space around the body. Tex Avery's extreme poses are known for wild expansions beyond the limits of a character's Kinesphere. It can also be said that Avery's characters have highly elastic Kinespheres. Laban observed that movers form complex spatial patterns that can be one-dimensional, two-dimensional (planar) or, in the case of three-dimensions, can take on the forms of various polyhedra: the octahedron, cube, icosahedron and dodecahedron. For example, as Bob Incredible's boss at the insurance company lectures angrily about Bob's performance on the job, he repeatedly punches his fists downwards, on either side of his body, indicating the lower corners of the **Vertical** plane, thrusts a fist up and forwards to a corner of the **Sagittal** plane, and wipes both hands sideways, suggesting the **Horizontal** plane. This geometrical component of LMA is core to Laban's view that inner intent participates in the reciprocal relationship between self and environment through movement.

LMA offers us a framework of movement constructs that excel at delineating the elements of expressive style in movement. Where the Principles of Animation simply tell us that Squash and Stretch creates weight, LMA names the permutations of Squash and Stretch, observes them in the context of a movement phrase, notes what other movement components are combining with and affecting the particular qualities of Squash and Stretch, and allows us to interpret meaning from all of the above. Furthermore, where Squash and Stretch is promoted as the way to create qualities of weight in animation, LMA does NOT prescribe! Its immense value as a tool for animators is its style-neutrality, which supports authentic communication.

One of several overarching principles of LMA is the ebb and flow relationship between **Function** and **Expression**: while biomechanical body function supports the range of expressive movement patterns, the inner expressive drive influences and patterns the body. I view the Principles of Animation as serving mostly the Functional aspects of movement, with LMA serving the integration of Function with Expression. Story and characterization set the contextual and emotional arena in which theories of acting place Expression into dramatic perspective.

### Styles of cartoon style

In his role as director, Walt Disney demanded perfection from his animators, who developed a refined, sugar-coated realism in characterization and acting through the Principles of Animation. Designed for a broad family audience, the early Disney content was safe, satisfying and easy to digest.<sup>2</sup> In films such as *Snow White*, this was epitomized through Snow White's goodness, the evilness of the Queen, and the comic relief provided by seven distinctively unique dwarves. Describing this era, Thomas and Johnston wrote:

<sup>2</sup> "If animation tends to suggest 'cartoons for kiddies' this is clearly due, in great part, to Disney. Following Disney's audacious gamble on the animated feature film, animation became defined by the Disney model – that of the cartoon as child/family entertainment, and as such, a no-go era for most film critics and theorists other than as material for ideological/social analysis." (Pilling, 1997, p. xi.)

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“...a more subtle kind of action with more complex acting and more meaningful expressions developed. The animation became so sophisticated that it was almost impossible to recognize the basic principles. The medium had developed into an art form.” (1981, p. 95)

To me this statement hints at the need for more movement parameters. But it also underscores Walt Disney himself as a creative force behind the content and style that emerged from his studio. In the context of commercial production, this model has prevailed in contemporary studios.

The Warner Brothers animators are legendary for their part in pushing the stylistic variations of cartoon animation. Their initial creative motivation came through an irreverent desire to move as far away from the Disney style as possible. Their content was directed towards an adult audience, and their gags developed a style of extreme physical comedy only possible in the imaginary world they created on screen. Tex Avery pushed the limits of physical extremes through his signature cartoon takes, whose main action typically involve extremes of Sudden, Strong, Direct and Bound Effort (a full Effort action), perhaps with a Rising and Retreating shape change that pulls the character beyond the boundaries of their Kinesphere. Bob Clampett, whose light-hearted zaniness exemplifies the Warner Brothers spirit, was known for a rubbery style of elasticity in his Squash and Stretch movement (Schneider, 1988).

With thoughtful attention to timing, gesture and facial expression, Chuck Jones explored the inner motivations of a character through subtle details of line, form and action. Through the Coyote and Roadrunner characters, Jones became master of the “moving hold” allowing his characters to suspend all action while thoughts register and responses are prepared. He used these held poses to create dynamic tension, exploring the comic elements of duration, while timing, with great precision, when the next action would occur. In *Feed the Kitty* (1952), Jones moves a bulldog named Marc Anthony through an astonishing range of emotions when the otherwise ferocious dog decides to take care of an adorable kitten. We enter an enjoyable empathy with this character through facial expressions in which muscles in one part of the face are pinched in contraction (corners of the eyes, nose, mouth, or the brows) with the rest of the face contrastingly slack. Handled in this way, the facial expressions reveal the complex of emotions such as pain mixed with affection when the kitty kneads the dog’s back with her claws. The animators created beautiful qualities of Weight in the face, as the dog’s floppy, elastic skin becomes alternately active, then passive, through changing facial expressions. We find it precious and endearing when Marc Anthony cuddles and kisses the kitten, pressing her into the bulging folds of his saggy jowls.

Further rebellion against the influence of Disney emerged at the UPA studio, where the constraints of volumetric form and the believable effects of gravity on mass were abandoned altogether in service to the graphic image. Called the “modernist style,” (Amidi, 2006), the work created at UPA, and other studios of the 1950’s, prioritizes design, color, line and composition. Animation principles such as Anticipation, Squash and Stretch, Follow through and Overlapping, if used at all, are extremely minimal. Yet, movement in these cartoons is not without its expressive qualities. In *Gerald McBoing Boing*, the mother’s sewing action creates a feeling of light tension as she pulls the thread, even though the shape of the arm gesture goes “off model” by Disney standards. In the kitchen reading a note from Gerald’s teacher, she collapses into a limp slump in frustration. Yet at other times, Shape changes are instantaneous – a held pose



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carries the idea, rather than the process of change. This creates a stylistic economy in which popping to a precisely posed expression operates on an evocative or metaphoric, as opposed to a visceral level.

The talented designers of the 1950's made their way to the Hanna Barbera studio, where "limited animation" revolutionized production for low budget television broadcast. Expressive characterization was emphasized through voice acting, while movement was kept minimal to enable quick completion of episodes and minimize the high labor costs associated with full animation. Movement in cartoon series such as the Flintstones has no Exaggeration and only subtle hints of Anticipation, Squash and Stretch or Follow Through. Contemporary vector-based animation for TV and the internet is built on these three basic Animation Principles.

Kricfalusi's Ren and Stimpy embraces cartoon style through its nostalgia for 1940's Warner Brothers irreverence, 1950's design and 1960's limited production. His style varies back and forth between highly visceral movement, making frequent use of held Bound Flow with grotesquely distorted shapes, and graphic stylization in which tension neutralizes and form has no boundaries. Kricfalusi takes great pleasure in prolonging images and movement that present bizarre moments of discomfort! The back and forth play between visceral and graphic qualities somehow adds to this unease.

### **Uses and abuses of cartoon style**

Through this progression from the full animation of 1930's Disney style, to the extremes and refinements of Warner Brothers, the graphic emphasis at UPA and finally to the limited techniques of TV animation at Hanna Barbera, we find that there has been a gradual economization of movement. Three core Animation Principles remain throughout: Anticipation, Squash and Stretch, and Follow Through and Overlapping. Their function is to support aliveness, believability and characterization. As such, they form the building blocks of style and expression.

What makes these three Principles essential? Anticipation is the clearest signifier of intent. In Laban terms, Anticipation is the Preparation of a phrase, where the mover's intent initiates and organizes the motor pattern that follows. Squash and Stretch comes in second because, initiated by breath, it represents the modulating flow of feelings and their effect on the plastic form of the body. Squash and Stretch is often used to represent breath itself. It also serves the use of breath to integrate posture with gesture, and supports the flow of movement through the body within a phrase. When used in the context of spatial locomotion and gravity, it represents the mass and material quality of the character's body. These multiple functions of Squash and Stretch make it the main qualifier of aliveness—keeping in mind that we need Anticipation along with Squash and Stretch to embody characters with intent. Follow Through and Overlapping is about the details of body part articulation: where movement initiates in the body, and how it sequences from one part to the next. The initiation and sequencing serve to visually locate the center of mass and indicates the transfer of weight through the joints. Combined with Squash and Stretch, it supports the physical materiality of forms in motion.

Anticipation, Squash and Stretch, and Follow Through and Overlapping are often seen together as the Preparation, Action and Recuperation of a Phrase. Phrases represent complete expressive units that place movement in the broader context of unfolding narrative events. Phrased together, these Animation Principles provide the building blocks for creating authentic character performances.

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Abuse of cartoon style occurs when Animation Principles are used as a matter of course, without specifically crafting the movement to develop unique characterization and style. If not integrated with Expression, the Principles risk being treated as a formula that only offers a quick path to creating Functional movement. This happens frequently in education, where fundamental exercises such as the Bouncing Ball and Waving Flag teach the Principles from a Functional perspective. At the early stages of learning to animate, if you get Function wrong, Expression won't happen. However, if Expression is clearly defined before starting to animate, the Function will often take care of itself. This is where animators can turn to the craft of acting for tools that will clarify intent, before getting lost in the frame-by-frame process.<sup>3</sup>

Clarity of Expression remains critical for experienced animators and directors when the movement characterization somehow doesn't match the voice performance or dramatic context, as with the earlier example of Ratchet. While this can certainly occur in theater or live action, it is a unique challenge for animators who create characters that are separate entities from the voices that embody them. In addition to Robots, we see this occurring in recent computer animated character performances such as Alex in *Madagascar* (2005), or RJ in *Over the Hedge* (2006). Here, the Animation Principles feel applied for the sake of creating a "cartoony look," but seem way over the top in terms of what the characters are expressing. As a result, the action feels hyperactive and predictable, and the characters shallow.<sup>4</sup>

We can also encounter a situation in which the director does not possess the terminology needed to communicate with the animators about movement. The director may have clear expressive goals but may not know what kind of movement will create that expression. Or, the director who employs the language of Animation Principles may become limited by their emphasis on Function. Issues of consistency can also occur when one character is animated by multiple animators. LMA terminology can provide a clear movement signature, defining the specifics of characterization that animators can reference, like a "model sheet" for movement.

Animation Principles become a unifying factor for cartoon style in the context of commercial classical animation production. Studio production necessitates a standardization of stylistic signifiers in both visual and movement design. Particularly when production becomes spread across continents, stylistic consistency becomes the priority over stylistic creativity.

Another place where cartoon style is at risk of abuse is on the internet, in part due to the proliferation of vector-based interpolation methods that create Squash and Stretch by scaling as opposed to morphing. Websites and animated greeting cards are rampant with brightly colored text that Squashes and Stretches around the screen. The abusers "apply" this movement as a signifier of fun, entertainment and comedy implied by the cartoon style. This creates a condition in which cartoon style itself becomes a signifier for what it used to be back in the Golden Age at Warner Brothers. It is as if the "idea" of Bugs Bunny has been extracted from its source and used as cartoon seasoning. Audiences widely accept this misuse and chuckle at even the slightest amount of cartoony-ness. This cartoon-chuckle-reflex may also be a signal of the aliveness promoted through cartoon style movement, which creates in us a non-verbal moment of recognition. Yet, in this scenario, cartoon style doesn't deliver authenticity because it has not been used intentionally, creatively, or with a sophisticated sense of design, which are the hallmarks of style and expression.

<sup>3</sup> We have Ed Hooks to thank for bringing the world of acting to animators (Hooks, 2003).


<sup>4</sup> Another aspect to consider for *Madagascar* is the newness of the Squash and Stretch capabilities for 3D computer animation, which took some adjusting to for animators raised on a diet of 3D. *Madagascar* was among the first 3D computer animations to gain technical mastery over the ability to create Squash and Stretch movement in 3D. While some of its animation seems "forced," it contains many wonderful character performances.

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### Conclusion

Through the evolution of cartoon style, we have gained insights into its purpose and value for character animation. The Animation Principles originated out of the need to articulate a method for creating believable movement and authentic characterization, and has served this purpose very well over the years. Animated movement has the potential to communicate subtle layers of meaning, yet the terminology and tradition of cartoon style can pose limitations when used without artistry. Animators are encouraged to take creative responsibility for the movement design of their characters, towards creating authentic, embodied character performances. This is an essential aspect of creative invention within the art form.

Cartoon style is a specific configuration of movement qualities, and has become, to a certain extent, the “default” movement style of animated film. Through the movement vocabulary of Laban Movement Analysis, we have the potential to expand our understanding of animated movement. LMA is directly applicable to the creative process of animation, where it teaches us about the richness and complexity of communication through movement. As animation for visual effects and games continues to strive towards the qualities of live action, there has never been a stronger need for a complete framework of movement concepts.

Movement is the raw material of animated film. Through movement we can read an animated film, just as we can “read” music through its melody or rhythm, or a painting through color, line and shape. Observing animated film in terms of movement provides a direct connection to the creative source: the frame-by-frame process of designing movement. In animation studies, we are obligated to consider movement as the fundamental vehicle of expression in animated film, and to feature it as part of any theoretical discussion. 

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