

With strings attached: Barthes' 'On Bunraku' from Thunderbirds to Japanese robot animated shows

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ABSTRACT

In his 1983 overview of the semiotic aspects of “performing objects,” which focuses primarily on puppet theatre, Frank Proschan criticizes Roland Barthes’ impressions of the Japanese bunraku puppet theatre performances, specifically the separation between the different parts of the puppet operation, which leads to the appeal of ‘the part’ rather than the ‘totality’ of the body accepted in western culture. Proschan argues that such separation is not unique to Japanese performances. However, Bolton (2002), while not arguing for uniqueness, claims that such separation is a part of Japanese culture and links it to the 1995 Japanese animated film *Ghost in the Shell*. This article examines Bolton’s, Barthes’, and Proschan’s argument in light of the Japanese animated robot shows, where such separation is common, through an examination of non-Japanese influence – the puppet shows, and in particular *Thunderbirds* (1965-1966) produced by Gerry Anderson in the United Kingdom. The article concludes that, while the Japanese animated robot shows and the Anderson productions that inspired them indeed emphasize the appeal of ‘the part,’ they do so in a manner that challenges both Barthes’ impressions of the bunraku and Proschan’s observations of the relationship between performing objects and animation.

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1. Introduction

In his 1983 article, ‘The Semiotic Study of Puppets, Masks, and Performing Objects’ Frank Proschan argues for the importance of the semiotic research of what he describes as “performing objects” – “material images of humans, animals, or spirits that are created, displayed, or manipulated in narrative or dramatic performance.” Proschan gives various examples of such objects, including puppetry, masks worn by actors, drawn images used by storytellers, and religious icons carried in religious rituals, among others. According to Proschan, performing objects offer a wide variety of cultural signs that represent different aspects of daily life (3-5). Proschan also discusses possible analysis tools for the study of performing objects, noting that the iconography of such objects can be examined through their design or, if this is not articulate, the movement involved in the performance or other elements such as narration and music that accompany the performance (7-10).

Proschan criticizes several previous studies of semiotic objects, particularly puppetry, notably Roland Barthes’ views of the Japanese bunraku puppet theatre. Barthes was fascinated by the performance method of bunraku, in which three puppeteers, all present and standing on the stage, operate a single puppet, each responsible for a different part of the puppet’s body. Barthes argued that this method transcends the Western notion of performance, in particular its notion of the “totality” of the body and the voice, focusing the attention instead on the different components of the performance and bringing to focus the appeal of “the part” (Barthes 1971:76-80). Proschan argues that the separation between different performance components is not unique to bunraku or Japan, pointing to examples in French 18th-century theatre and going as far back as the conventions of ancient Greek theatre (1983:20).

Despite this, Christopher Bolton (2002) argues that breaking the theatrical sign in bunraku performances, as Barthes observes, is a practice with strong Japanese origins – given the extent of its echoes in Japanese culture. In his article, Bolton examines this breaking in the context of Mamoru Oshii’s 1995 animated film *Ghost in the Shell (Kōkaku Kidōtai)*. The film, based on a manga (Japanese comics) by artist Masamune Shirow, follows a policewoman with a cybernetic body who is tasked with capturing ‘The Puppet Master,’ a rogue artificial intelligence that takes over bodies and performs cybercrimes in the futuristic city where the story takes place. Bolton recognizes the separation between the body and the voice, a recurring motif in the film, as a parallel to Barthes’ observation about how bunraku performances break the performing body into parts. In particular, Bolton points to the film’s climatic sequence in which the protagonist’s body is torn apart violently, leaving only her voice and the voice of The Puppet Master – with the bodiless voices now representing the world of pure data (2002:748-758). Interestingly, Bolton also argues that the separation of a voice from a body is an essential element in animation as well (since character voices are always dubbed), echoing

Proschan's observation that "some of the artistic devices of traditional puppetry such as distorted voices and flexible bodies are familiar to most of us only as they have been adapted by film, especially animated cartoons" (Proschan 2002:6).

What Bolton ignores, though, is the different nature of the separation between the voice and the body (and in certain parts of the film – between the different parts of the protagonist's body) in *Ghost in the Shell* and the similar separation in Bunraku performances, as described by Barthes. While in both cases, the body in question is a representation of the human body (hand-drawn and animated in the film, constructed as a puppet in the bunraku performance), in *Ghost in the Shell*, the act of separation is also a representation - it takes place as part of the film's narrative, with no relation to the actual process of the film's production. In contrast, a bunraku performance takes place within the physical space as part of the performance, regardless of the narrative. This is not only a case of a different signifier – a material puppet existing in the three-dimensional physical space against an animated film, drawn by hand on celluloid and projected/transmitted – but also a very different signified; the audience's perception of a puppet theatre shows against the perception of watching an animated film.

In this respect, Bolton's argument, which parallels the separation between the voice and the body in bunraku performances and animation productions, is not entirely relevant to the same separation that he discusses as part of the film's plot – the latter takes place in a different dimension of the film, one related to the content rather than to production. However, suppose we consider Proschan's observation about the adoption of 'artistic devices' from puppet theatre to animation. In that case, it can be argued that *Ghost in the Shell* turned the performance method of bunraku into a narrative and stylistic approach for the film.

This article argues that this adoption exists not only within *Ghost in the Shell* but is also a powerful recurring motif across an entire genre of Japanese animation – robot animation and one of the genre's most recognizable stylistic and narrative elements, the launch sequence. Moreover, the article aims to demonstrate that in addition to bunraku, the genre also adopted the same elements from the television puppet shows produced in the United Kingdom by Gerry Anderson – and that these shows offered the same "breaking of the theatrical sign" as observed by Bolton, in a manner similar to the Japanese puppet theatre.

2. Robot animation and launch sequences

Though the term 'Robot Animation' or 'Robot Anime' (*anime* being the Japanese term for animation) generally refers to Japanese animated productions – television shows or films – that feature robots within their narrative, it is closely associated with narratives featuring human-controlled giant robots. The pioneering work in the genre

was the animated television show *Tetsujin 28-gō* (known in English-speaking countries as *Gigantor*), broadcasted between 1963 and 1966, based on a manga by artist Mitsuteru Yokoyama. The show follows a boy who uses a remote-controlled robot to fight crime. The show's content strongly reflected Japanese anxieties in the post-war period, as it presented the robot's character as a weapon developed by the Japanese army during World War II, which remained unused due to the country's defeat in the war (Hornyak 2006:58-59).

The more influential work in the genre, however, came in 1972 with the production of *Mazinger Z* (*Majingā Z*), produced simultaneously as both a manga serial and an animated television series by artist Go Nagai (originally running in Japan from 1972 to 1974, and released in English-speaking territories as *Tranzor Z*). The narrative also follows a young boy who controls a giant robot to fight adversaries, with the boy protagonist now sitting inside the robot's head, controlling it from within. Although also inspired by the historical events of World War II, *Mazinger Z* owes a narrative and stylistic debt to the works that came before it – as giant robot characters were now common in Japanese animated productions – and to Japan's post-war status as a leading modern industrial country. *Mazinger Z*, according to Hornyak (Hornyak 2006:59-61), celebrated the fusion of the human and the mechanical body, as well as the interaction between the robot and its advanced scientific surroundings.

One stylistic and narrative element that became strongly associated with *Mazinger Z* and the shows that attempted to emulate its success was 'the launch sequence' – a series of scenes showing the robot or robots piloted by the show's protagonists being prepared for action – with an emphasis on the protagonists getting to their pilot seats. The robots are activated in a step-by-step manner.

Much like Barthes' observation of bunraku performances, the launch sequences emphasized the appeal of 'the part' – the individual component of the robot's operation, including the young human pilot (much like the puppeteer). As Jonathan Clements (2013:150-151) explains, the "transforming"¹ of a robot character holds great appeal for young viewers, who initially see it as something magical and later consider it an understanding of the robot's inner workings. This appeal was not lost on toy manufacturers, who mass-produced tie-in toys for *Mazinger Z* and its successors.

At the same time, the launch sequence, much like the separation of the voice, the body, and different parts of the body observed by Bolton in *Ghost in the Shell*, is an entirely narrative-related affair. There are no actual 'inner workings' of a giant robot character in the physical space; they are entirely a part of the robot animated shows' narrative.

¹ The transformation that Clements refers to is actually a more elaborate transformation of a robot into vehicle, or a vehicle into other vehicle (an example discussed further in this article). However, the initial launch sequence of a robot character, as in *Mazinger Z* can also be considered as a "transformation" of the character from a lifeless form to an active, moving entity.

Before examining case studies of how the producers of these shows drew inspiration from Barthes's appeal of 'the part' in bunraku performances, another source of inspiration, also related to puppetry, should be examined – the puppet shows of British producer Gerry Anderson.

3. Gerry Anderson, *Thunderbirds*, and the launch sequence

Gerry Anderson (1929-2012) is best known for producing science fiction television shows featuring string puppets and miniature vehicles, notably *Thunderbirds* (1965-1966), which followed a rescue team equipped with futuristic vehicles performing heroic tasks worldwide. His influence on Japanese animation, particularly the robot genre and the launch sequence, is widely acknowledged. In his overview of the history of the genre, Ryūsuke Hikawa (2013:10-11, 52) points to the profound influence that *Thunderbirds* had on the launch sequence within and outside the genre in Japanese productions. At the same time, Masaaki Hirakata, curator at the Tokyo Metropolitan Museum of Photography, explained that "Thunderbirds was like a modern sci-fi expression of bunraku" during a press coverage of an exhibition devoted to Anderson's works in the museum (Gilhooly 2001).

Hirakata's observation is worthy of special attention since it brings together two seemingly different art forms, even though they share the same artistic roots. From a technical perspective, both bunraku performances and productions like *Thunderbirds* are forms of puppetry. However, each employs a different technique (marionettes in Anderson's shows, manipulation by on-stage puppeteers in bunraku) and medium (televised production against stage performance).

Even more significantly, from a cultural perspective, bunraku performances are highly regarded expressions of Japanese culture. At the same time, Anderson's shows have been critically panned for many years for their aesthetic and genre choices. Science fiction critic Gary Westfahl (2012) described Anderson's puppet productions as nothing short of "artistic crimes against humanity," arguing that his attempts to tell realistic genre stories using marionettes resulted in "wooden" performances that "deprive the story of any emotional impact."

Interestingly, Anderson was also critical of the unnaturalness of his work. Despite his puppet shows' success, he was unsatisfied with the unconvincing way his marionettes moved. He tried in vain to make them look more realistic through design. The heavy presence of futuristic miniature vehicles in his shows was a means of overcoming the problem. By placing a marionette inside such vehicles, the marionette's movement would be reduced to a minimum while the vehicle's movement would dominate the action. Unlike his frustration with the marionettes, Anderson was quite happy with his miniature vehicles: to him, they represented realism and beauty (Garland 2009:61-74).

In retrospect, what frustrated Anderson and his critics about working with marionettes was a form of the breaking of the theatrical sign, observed by Bolton, who echoed Barthes. The 'unrealistic' quality of the marionettes' movement was not some fault in their operation; it was, to use Proschan's argument, an iconographic trait of their movement and performance. Audiences in live performances accept such unrealistic movements by marionettes because they consider it an integral part of the art of puppetry. Anderson's shows, however, were not performed live. They were shot and recorded for television broadcast, and Anderson himself (who was trained in photography rather than puppetry) understood – like his critics – that the medium of television is a poor fit for marionette performances.

However, Anderson's heavy use of miniaturized vehicles, especially in the vehicle's launch sequence, also demonstrates Barthes' argument about the appeal of the part rather than the whole. Anderson's launch sequences often emphasize the elements involved in the vehicle's operation before letting his audience see the complete vehicle in action.

For example, one of *Thunderbirds'* most elaborate launch sequences was the launch of the flying cargo carrier Thunderbird 2. The sequence (filmed once to be repeated in multiple episodes) opens with the pilot sliding down a tunnel into his chair at the carrier's cockpit, where he pulls a lever, turning on the carrier's systems. Different types of cargo containers slide beneath the vehicle, and once the needed container arrives, the pilot pulls a lever again, bringing the carrier down to connect with the cargo. Then, different parts of the rescue team's base island start moving – rock walls that concealed the vehicle slide down, and trees fold sideways to make room for the carrier, which slowly makes its way across the runway. Finally, a section of the runway on which the carrier stopped slowly rises above the ground, allowing the vehicle to be launched upwards.

While Anderson may have created this launch sequence in an attempt to apply 'realism' to his work, the sequence ends up emphasizing the appeal of 'the part,' as observed by Barthes: the 'totality' of the vehicle and its takeoff is reserved to the final seconds of the sequence. At the same time, most of it is devoted to separate segments that portray each element individually.

There are two significant differences from Barthes' observation, though. First, much as in Bolton's analysis of *Ghost in the Shell* and unlike Barthes' admired bunraku performances, the appeal of 'the parts' in the sequence does not draw attention to the actual operation of the miniature vehicle on the show's set. Instead, it's a fictional portrayal of the vehicle's operation within the narrative. It is another layer of fiction meant to make the fictional narrative feel realistic to its audience.

Second, while Barthes' analysis focused on the anatomy of the bunraku puppets and the different puppeteers that operate it, the sequence opens with an examination of the 'anatomy' of the vehicle – the pilot arriving at the cockpit, the connection to the container – but soon focuses on external elements as well, with 'parts' of the

surrounding environment playing a role in the launch. Unlike the puppet in the bunraku performances described by Barthes, the launch sequence focuses on the launch, the action, and everything that leads to it rather than the vehicle individually. With the whole surrounding environment taking part in this action, the role of the human pilot, portrayed by a puppet, is minimized: the scenes featuring its sliding down to the cockpit give it a passive role, and the occasional scenes showing the pilot pulling a lever are dwarfed by the significant changes in the surface that surround the vehicle, in service of its launch. Anderson's frustrations with creating realistic, nuanced performance using his marionettes found their way to the launch sequence, where a miniature vehicle and its surrounding technical environment substitute the marionette's poor imitation of the human anatomy.

4. *Mazinger Z*, *Getter Robo*, and the Bunraku-Anderson connection

Hikawa (2013:10) argues that the initial appeal that young Japanese viewers found in *Thunderbirds* was not just aesthetic but also political: with its hardware classified as 'rescue vehicles' rather than war machines, the show fitted with the perception of post-war Japan as a peaceful nation. Cull (2006:193-204) argues that the show held somewhat similar appeal to the young audience in its native United Kingdom – allowing this audience to identify with the heroic deeds of the show's protagonists in the Cold War era while at the same time promoting ideals of global and inter-racial collaboration.

In this respect, the giant robots piloted by the young protagonists of the Japanese animated productions distanced themselves from this particular source of appeal, as the robots featured in these shows were very much war machines. The influence of Anderson's productions, particularly *Thunderbirds*, on the Japanese genre remains primarily aesthetic. However, this aesthetic was taken in a direction very different from Anderson's.

This article does not offer an extensive analysis of all Japanese animated robot shows or even a representative sample of them. Instead, it examines the launch sequence of two early shows from the genre, where Anderson's influence is felt most strongly. Hikawa argues that the launch sequence in Go Nagai's *Mazinger Z* (as noted above, the first show to introduce the concept of a young protagonist piloting a giant robot) has a "decidedly *Thunderbirds* flair" (2013:16). This launch sequence opens with the protagonist, Koji Kabuto, flying his hovercraft (named 'Hover Pilder' in the show) and approaching the show's titular giant robot, which in itself rises from an opening water pool in a manner that indeed recalls the launch of the Thunderbird 1 rocket from *Thunderbirds*. Kabuto lands his hovercraft on the top of the robot's head, where it fits in, and the robot – which was motionless up to this point, is turned on in a manner that recalls awakening – its eyes light up, its body straitens, and its limbs start moving.

While the rise of the robot in *Mazinger Z* recalls Anderson's show, it has two crucial aesthetic differences. First, while the protagonists of *Thunderbirds* piloted vehicles, the protagonist of Nagai's show controls a robot – an object with a structure that simulates human anatomy. Second, Kabuto is far less passive than the protagonists of Anderson's show during the launch sequence. He does not slide into the robot but instead flies another vehicle into it, and his presence and actions in the activation of the robot through levers and buttons are more emphasized in comparison to the occasional lever-pool by the pilots of the *Thunderbirds* vehicles.

If the launch sequences for the different vehicles in *Thunderbirds* emphasized the appeal of the different parts that come together in the vehicle and its surrounding environment to allow the launch, the launch sequence in *Mazinger Z* has only two such parts² – the robot and the hovercraft. The hovercraft merely serves as a pilot seat for the protagonist, who lands inside the robot's head – a clear metaphor for the brain and consciousness. The launch sequence of *Mazinger Z* emphasizes the fusion of the pilot's hovercraft with the head of the robot. The turning on/awakening that is presented as the core of this sequence signifies the proper role of the protagonist: he may represent the 'brain' that controls the body, but in effect, he is the puppeteer who manipulates that body. Like a lifeless puppet, the *Mazinger Z* robot 'comes to life' once the protagonist activates it. As in the bunraku performance admired by Barthes, the show's launch sequence gives the audience a view of the puppeteer. The hovercraft and the robot's body have their appeal, but the most appealing 'part' in *Mazinger Z* is its human protagonist.

1974 saw the release of *Getter Robo* (*Gettā Robo*), another robot animated show produced by Nagai, now with a launch sequence that its initial aesthetic is even closer to that of *Thunderbirds* – yet again, its deeper thematic qualities are very different from Anderson's show. The show, now following three protagonists rather than one, featured a launch sequence in which each protagonist slides down a tunnel (an apparent reference to Anderson's shows.³ After landing in their chairs and automatically being strapped, the protagonists' chairs move into the cockpits of each pilot's respective plane (again, in a manner that strongly recalls Anderson's productions). The protagonists activate their aircraft that fly out of the base. Then, the protagonists manipulate their planes' controls further, causing each plane to transform into another part of the show's giant robot's anatomy: torso, jetpack, and legs. The different planes combine into the robot, and similarly to *Mazinger Z*, the robot's eyes light up, symbolizing awakening and coming to life.

² Another part occasionally follows these two, though – whenever the *Mazinger-Z* robot needs to fly, a flying jet – named 'Jet Scrander' in the show – attaches itself to the robot's body. This, however, is presented in the show as a separate occurrence from the launch sequence itself, even if it follows it immediately.

³ Although the segment in which each pilot jumps into the tunnel – something that would have been hard if not impossible to achieve with Anderson's puppet, appear to draw more from Anderson's later live-action show *UFO*, discussed further in this article.

As with *Mazinger Z*, *Getter Robo* strongly emphasized the pilots involved in the launch sequence, and effectively turned them from pilots to puppeteers once their planes came together to form a robot. However, in *Getter Robo*, the puppeteering was of a different kind: the protagonist of *Mazinger Z*, who sat down inside the head/brain of the show's giant robot, was operating the robot like a puppeteer manipulating a marionette like the puppeteers who worked on Anderson's shows. The protagonists of *Getter Robo* were closer to the puppeteers of the bunraku performances – with each controlling another part of the robot's anatomy, and each part of this anatomy, as Barthes noted, had its own appeal.

5. Broken Puppets and Puppeteers – *UFO* and *Neon Genesis Evangelion*

Anderson's influence over Japanese robot animation continued to extend beyond the discussed examples of *Mazinger Z* and *Getter Robo*. As noted above, this article aims to examine every such case study. One later example that justifies such examination in the context of this article's discussion of the puppet theatre connection between Anderson's productions and Japanese robot animation, though, is the relationship between Anderson's show *UFO* (1970) and the 1995 Japanese animated show *Neon Genesis Evangelion* (*Shin Seiki Evangelion*) produced by Hideaki Anno.

Unlike his previous puppet shows, *UFO* was a live-action show whose characters were portrayed by actors while still utilizing miniature vehicles for its special effects sequences. Anderson hoped to overcome the production difficulties involved with puppets, described earlier in this article, by employing actors. However, the initial critical reaction to this change in production was unfavorable, with critics arguing that the acting had the same wooden quality as the marionettes in Anderson's previous shows (Worley). The show did, however, attempt to feature more adult-oriented stories in comparison to Anderson's puppet shows, especially in its depiction of protagonist Ed Straker (Ed Bishop) as a dysfunctional family man, in contrast to the portrayal of ideal family life in *Thunderbirds*.

While not the first Japanese animated show to try to address the adult audience⁴, *Neon Genesis Evangelion* also subverted the conventions associated with its genre as presented in previous productions. As in *UFO*, this subversion focused on the broken family relationships between the show's two main protagonists, scientist Gendō Ikari and his son Shinji, as opposed to the more positive portrayal of father/son relationships in previous genre shows (Malone 2007:113-114).

⁴ The long-running Gundam franchise, spreading across multiple media of animated television shows, movies, home-viewing formats, comics, toys and digital games, with its portrayal of futuristic tragic warfare, is a prime example of a title which has addressed this audience since 1979.

Other than the thematic connection, the two shows share similarities in narrative and style, from similar plotlines (a government-sponsored agency set up to fight aliens or monstrous beings under the threat of budget cuts) to similarities in the design of props and clothes, with characters in *Neon Genesis Evangelion* designed to resemble actors from *UFO*.

Another area in which *Neon Genesis Evangelion* resembles *UFO* is its launch sequences, specifically the segments in which the pilot reaches its vehicle or lack thereof. In *UFO*, the launch sequence for characters posted on the show's 'Moonbase' opens with these characters leaping into tunnel openings. Still, their way through the tunnel into the pilot's seat with moving chairs, familiar from *Thunderbirds* is not seen – supposedly because of the logistics involved with presenting such segments in live-action. The launch sequence in *UFO* cuts immediately from the pilots' leap into the tunnels to their fighter spaceships being lifted to the surface. In this sense, other than production logistics, it can be argued that *UFO* has effectively eliminated the appeal of the 'part' because, with this show, Anderson has finally achieved the realism he strove for – seamlessly blending human actors with miniature vehicles, doing away with any connotations to puppets or puppetry.

Similarly, *Neon Genesis Evangelion* also skips the segment in which its pilot characters enter their robots, and its launch sequence consists of the robots ascending to the surface. Furthermore, the show's early episodes give the impression that the pilot characters play little part in preparing their robots for action. Rather than the puppeteer-pilots who manipulated the robots of *Mazinger Z* and *Getter Robo*, the launch sequences in *Neon Genesis Evangelion* give the impression that the pilot-protagonists of the show are themselves puppets manipulated by greater forces – the adults who surround them, which echoes the show's overall theme of the young protagonists having a dysfunctional relationship with their families and adults in general.

If, according to Bolton's interpretation of Barthes' observations, bunraku performances break down the theatrical sign by exposing the puppeteers behind it, and if, as the analysis presented in this article suggests, this breaking gave Anderson's shows, as well as the Japanese robot animation show their aesthetic appeal, *UFO* and *Neon Genesis Evangelion* denied this appeal from their audience by avoiding this act of breaking the sign.

6. Conclusions

The analysis presented in this article suggests that Anderson's puppet television productions can be seen as a link between traditional Japanese bunraku performances and modern Japanese robot animation. This link is connected by Barthes' observation about the appeal of 'the part' in bunraku performances, which was expanded on in Bolton's examination of *Ghost in the Shell*. However, the same analysis also indicates essential deviations from Barthes' observations.

First, the analysis does not support Barthes' argument that the appeal of 'the part' in bunraku performances rejects the Western notions of 'totality' and realism. On the contrary, Anderson and the producers of Japanese animated robot shows strived for the same appeal to give a more realistic feeling to their productions. Anderson did away with this appeal once he was no longer bound to use what he considered unrealistic puppets (in *UFO*). Anno did away with it to break the metaphorical puppetry connection in previous genre shows.

On the other hand, it should be noted that as in Bolton's analysis of *Ghost in the Shell*, the analysis of the connection between bunraku, Anderson's puppet shows, and Japanese robot animation also refers to the appeal of 'the part' in narrative frame, rather than in live on-stage performance. The different 'parts' of Anderson's miniature vehicles related to the pilots' arrival into their vehicles were never a part of the miniature vehicles themselves; they were fictional sets designed to give a sense of realism to the vehicles. The giant robots of Japanese animated productions were represented in the physical world as toys. However, such toys often also emphasized the appeal of 'the part,' as in the different toys that came together to form the robot of *Getter Robo*⁵, the inner controls of these robots, as seen in the launch sequences of their respective shows, were also rarely represented in the toys.

One possible conclusion of this gap between Barthes' observations and the analysis presented in this article is that animation, or even filmed puppetry, exists on a different artistic dimension than puppet theatre performed live on stage. The change in the medium, in the case of Anderson's filming of his marionettes (and placing them within more elaborate sets that are rarely seen in puppet theatre stage productions) or the drawn animated frames of the Japanese animated shows, eliminate or change the nature of the onstage appeal of 'the part' that Barthes found so fascinating. This echoes Proshan's observation about the tendency to borrow 'artistic devices' from puppet theatre into live-action and animated productions.

⁵ In fact, the toy producers had difficulties matching the combination portrayed in the animated show, and were only partly successful in making the toys do the same (Hikawa, 18).

However, Proschan's other observation is even more relevant in this context: movement can be an essential part of puppet theatre iconography. In the test cases examined in this article, the Anderson puppet productions and the Japanese animated robot shows do more than borrow 'artistic devices'; they adopt the entire iconography of a specific form of puppet theatre: bunraku.⁶

The same argument can be made for Bolton's analysis of the influence of bunraku performances on *Ghost in the Shell*. In Bolton's analysis of the film and the analysis presented in this article of Anderson's productions and Japanese animated robot shows, the iconography may belong to the narrative, rather than the bunraku's original performance method. Still, it is a similar iconography and demonstrates just one way in which animation and puppetry – and the larger category of 'performing objects' – can share. Research can extend to cell animation that directly refers to marionette performances (see, for example, Disney's 1940 film *Pinocchio*) toys manipulated by children as 'performing objects' (as in Pixar's 1995 film *Toy Story*) or animation techniques involving three-dimensional objects as stop-motion that can also be defined as 'performing objects.'

Proschan may have been dismissive about 'animated cartoons,' but the analysis presented in this article suggests that such cartoons, and animation in general, are very much part of his definition of performing objects.

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⁶ It can be argued that Anderson, in attempt to eliminate such iconography from his productions (the strings of the marionette) found himself adopting the bunraku iconography instead - though how familiar he was with bunraku is unknown.

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