

Warren Buckland

## Ghost Director

### Did Hooper or Spielberg Direct *Poltergeist*?

Spielberg released two films in 1982 – *E.T.*, which he directed but did not write; and *Poltergeist*, which he wrote and produced but did not direct (he hired Tobe Hooper). But controversy surrounds Spielberg’s actual role on *Poltergeist*. Before the film’s release, Dale Pollock noted that “Spielberg will ... be pacing the list of horror films with ‘Poltergeist’, which he produced (and according to reports, largely directed)” (1982a: H1). In his biography of Spielberg, Joseph McBride (1987) argues that “[Spielberg’s] involvement on *Poltergeist* was unusually intense for a producer and writer. ... It was generally believed in Hollywood that Spielberg simply moved in and took over the film creatively” (336). And in *The Guardian* a few years ago, David Thomson (2002) chipped in: “it is pretty well agreed now that [*Poltergeist*] deserves to be read as a Spielberg work”. The language of these critics is equivocal: “according to reports”; “It was generally believed”; “it is pretty well agreed”; and their aesthetic evaluations of the film are vague and impressionistic.

Spielberg spelled out the nature of his collaboration with Hooper: “[Tobe Hooper is] just not a strong presence on a movie set. If a question was asked and an answer wasn’t immediately forthcoming, I’d jump up and say what we *could* do. Tobe would nod in agreement, and that became the process of the collaboration. I did *not* want to direct the movie – I had to do ‘E.T.’ five weeks after principal photography on ‘Poltergeist’” (quoted in Pollock 1982b: G2; emphases in the original).

Hooper, for his part, simply noted that “I directed the film and I did fully half of the story boards” (quoted in Pollock 1982b: G1). He maintains that no problem exists concerning his and Spielberg’s creative input into the film. Spielberg attempted to quell the intense media interest in the controversy by writing an open letter to Hooper in the form of a full-page ad in the June 9 1982 issue of *Variety*. It began: “Regrettably, some of the press has misunderstood the rather unique, creative relationship, which you and I shared throughout the making of *Poltergeist*” (quoted in McBride 1987: 339). I shall attempt to distinguish legend from fact in regards to *Poltergeist*’s disputed authorship.

## Using Statistics to Analyse Style

I decided to analyse *Poltergeist* for my book *Directed by Steven Spielberg* (2006; the following is an abbreviated version of my analysis in that book). In matters of “authorship attribution,” I discovered that statistics is frequently used to quantify style and credit an author. Don Foster’s (2001) headline-grabbing statistical style analyses of the anonymous novel *Primary Colors* (which he correctly attributed to Joe Klein), the Unabomber’s manifesto (whose author he identified), and the anonymous “Funeral Elegy,” which he attributed to Shakespeare (his most problematic attribution), are only the most visible versions of the use of statistics to determine authorship. Through a shot-by-shot analysis, I use statistical methods to compare and contrast *Poltergeist* to a selection of Hooper’s and Spielberg’s other films. From this analysis I determine how *Poltergeist*’s style conforms to and deviates from Spielberg’s and Hooper’s filmmaking strategies. Such an analysis contains a lot of number crunching and statistical testing, which are necessary if we want to go beyond impressionistic criticism and make an informed judgement on the creative force behind *Poltergeist*. The results of my analysis may surprise you.

### Counting Shots

To place *Poltergeist* into context, I examined the stylistic elements of films whose authorship is undisputed: Spielberg’s *E.T.* (1982) and *Jurassic Park* (1993), Hooper’s *Salem’s Lot* (1979) and *The Funhouse* (1981). I then compare these films of undisputed authorship with *Poltergeist*, to determine whose style it matches. Of course, the result of such a speculative analysis is never 100% certain, but can only be stated with a degree of probability.

Statistical analysis explores style numerically by quantifying – that is, measuring and counting – a film’s stylistic features, especially those relating to the shot. It is more credible and valid than the standard *Cabiers* and *Movie* schools of stylistic analysis – *mise-en-scène* and auteur criticism – because it downplays the critic’s subjective impressions of a film in favour of a more detached and accurate analysis.

Privileging the director has always created controversy in what is an inherently collaborative medium. But we need to remember some of the more level-headed claims filmmakers and critics have made in its defence. For Karel Reisz (1968), the director “is responsible for planning the visual continuity during shooting, and he [sic] is therefore in the best position to exercise a unifying control over the whole production” (58). For V. F. Perkins (1972), “The director is there to ensure that the details of performance and recording are related

to the total design” (179). And Anthony Asquith (1950) suggested the film director can be compared to an orchestra conductor, for both control a large creative team. The film director does not need to write the script or light the set, just as an orchestra conductor does not need to compose the music or play an instrument. Each instrument in an orchestra is not just playing solo, but is subordinate to the whole orchestra, which creates a unique sound not existent in any one instrument. The conductor is in control of generating this unique sound from the various instruments. The film director, like the conductor, is the only member of the creative team who bears the whole work in mind, controlling the way each instrument contributes to the work’s total design.

Guided by Barry Salt’s research (1974, 1992, 2004), I quantify the individual styles of Spielberg and Tobe Hooper by measuring and counting the formal elements of a selection of each directors’ films – elements that are typically under the director’s control, including: duration of the shot; shot scale; camera movement; angle of the shot; low camera height; use of shot/reverse shot; length and number of shots in a typical scene. I then compare the style of *Poltergeist* to that of Spielberg’s and Hooper’s films, to see whose style it matches.

Shot duration is simply measured in seconds. The average length of each shot in a film is calculated by dividing the number of shots into the film’s length to produce the film’s average shot length (ASL).

The following scale of shot are identified and counted: Very Long Shot (VLS): human subject is small in the frame; Long Shot (LS): full shot of the human body; Medium Long Shot (MLS): the human subject filmed from the knees up; Medium Shot (MS): the human subject filmed from the waist up; Medium Close-Up (MCU): the head and shoulders; Close-Up (CU): the head only; Big Close-Up (BCU): part of the face or fragment of the body. I count the number of shot scales used in each film, and determine how long each one is on screen.

I also count the camera movements in each film, which I note down in two stages: type of movement (still, pan, track, crane, pan and track), and direction (sideways, up, down, back, forward).

The angle of shot is also quantified: is the camera at eye level? Or is it a low camera angle or high camera angle? I distinguish low camera *angle* from low camera *height*. In a low camera angle, the camera is pointing upwards; in a high camera angle, the camera is pointing downwards. When a shot is classified as low camera *height*, the camera is close to the ground. Low camera angle and low camera height are therefore not the same. Camera angle is defined in terms of the subject being filmed (whether the camera is pointing up to or down on the subject). Camera height is defined in terms of the camera’s relation to the ground. A camera can be low on the ground, but not pointing upward (as is typical in Yasujiro Ozu’s films). This would be low camera height

but not low camera angle. Sometimes, of course, the camera is low on the ground and pointing upward. This is low camera height plus low camera angle.

Shot/reverse shot (or reverse angles) refers to a pair of shots in which the camera changes direction by more than 90° in the horizontal plane (Salt 1992: 146). It is commonly used when filming two people facing one another. Salt distinguishes “in front of the shoulder reverse angles” (what Steven D. Katz [1991] calls internal reverse angles, in which the camera is placed inside the circle of action), and “behind the shoulder reverse angles” (what Katz calls external reverse angles). An optical point-of-view shot (shot of character looking/shot of what they see from their vantage point) is a subset of reverse angle cutting. When counting reverse angles I did not feel the need to distinguish between these different types.

I define a scene using John Ellis’s (1982) criteria: a scene displays a marked unity of space, time, characters, and events: “The segment is a relatively self-contained scene which conveys an incident, a mood or a particular meaning. Coherence is provided by a continuity of character through the segment, or, more occasionally, a continuity of place” (148). I mark a change in scene if at least two of the following take place: the film changed location; a temporal break occurs; the film cuts to a different set of characters and events.

Following Salt, I collected this data by going through each film shot-by-shot – or at least the first 30 minutes of each film, because this constitutes a representative sample and generates sufficient data for comparison. I entered the data into the statistical software package SPSS (an elaborate spreadsheet), and applied a few very simple statistical tests that summarize the data.

## Reasons for Classifying *Poltergeist* as a Tobe Hooper Film

The data for all five films can be found in Appendices 1 to 5 at the end of this essay. The following comments offer a partial interpretation of those Tables.

Camera movement: Both *Salem’s Lot* and *The Funhouse* have less than 20% moving camera, whereas *E.T.* and *Jurassic Park* have over 20%. Only 15% of shots in *Poltergeist* involve a moving camera, which is closer to Hooper’s films than to Spielberg’s.

Shot scale: Hooper chooses more medium close-ups (MCU) than Spielberg, but fewer long shots (LS). Hooper uses over 30% medium close-ups, whereas Spielberg averages out at 27%. *Poltergeist* is closer to Hooper’s average because it contains 34% medium close-ups. Conversely, the amount of long shots Hooper uses is around 5-6% whereas Spielberg’s is 14%. *Poltergeist* contains only 7% long shots, very close to *Salem’s Lot* and *The Funhouse*. In general, Spielberg’s shot scales vary more than Hooper’s, and the relatively limited

variation of shot scale in *Poltergeist* is closer to Hooper than to Spielberg. On average, 58% of Hooper's shot scales fall within the "big close-up to medium close-up" range; for Spielberg, the figure is only 45%. In *Poltergeist*, 55% of the shot scales fall within this range, significantly closer to Hooper than Spielberg.

Shot duration: Hooper uses a higher number of shots in the 1-3 second range than Spielberg, who typically spreads out his shot lengths. *Salem's Lot* and *The Funhouse* are almost identical – 45% and 46% of shots fall within the 1-3 second range. Conversely, in *E.T.* only 41% of all shots fall within the 1-3 second range. *Jurassic Park* is even lower, at 35%. In *Poltergeist*, 54% of all shots fall within the 1-3 second range, much closer to Hooper. In more technical terms, the values for shot length are more positively skewed in Hooper than they are in Spielberg – that is, more slanted away from the average shot length towards the lower values. A film in which shot lengths are perfectly distributed around the average has a skew value of 0. The skewness values for shot duration in Hooper's films are: *Salem's Lot*: 5.6; *The Funhouse*: 4.1; in Spielberg's films the value is 2.7 for both *E.T.* and *Jurassic Park*. *Poltergeist's* skewness value is 5.5, very close to Hooper's values and significantly higher than Spielberg's.

## Reasons for Classifying *Poltergeist* as a Steven Spielberg Film

Despite the strong evidence that Hooper exercised control over camera movement, shot scale and shot duration (in the 1-3 second range) in *Poltergeist*, information exists pointing to Spielberg's influence.

Low camera height: 53% of all shots in *Poltergeist* were filmed at a low camera height, where the camera is 3 feet or lower from the ground. Compare this with *Salem's Lot's* 29%, *The Funhouse's* 33%, *E.T.'s* 49% and *Jurassic Park's* 42%. The decision to use low camera height is of course motivated by the story material – the two young children in *Poltergeist*, the 3 foot E.T. and two young children in *E.T.*, and the two young children in *Jurassic Park*. However, the director always has a choice, and can film children or aliens at higher heights or adults at lower heights. In *Jurassic Park*, for example, the two young children do not even appear in the first 30 minutes of the film, the length of the sample, yet 42% of the shots were still filmed at low camera height. We can infer that the decision to use so many low camera heights in *Poltergeist* was Spielberg's suggestion, which constitutes one of the pieces of advice he offered to Hooper on the set.

Shot duration: Hooper tends to allow his larger shot scales (in the "medium to very long shot" range) run for long periods of time. (This has the effect of compensating for and balancing out the short duration of his smaller shot scales, making Hooper's overall average shot length close to Spielberg's.)

In *Salem's Lot*, the average length of each medium shot (MS) is 9.3 seconds; in *The Funhouse* each medium shot averages out at 9.5 seconds. By contrast, in *E.T.* the medium shot averages out at only 5.2 seconds, and in *Jurassic Park* it is 6 seconds. In *Poltergeist*, the average length of a medium shot is 6 seconds, the same as *Jurassic Park* and close to *E.T.*, and significantly shorter than the duration of Hooper's medium shots. The evidence for the medium long shot (MLS) is almost the same: *Salem's Lot*: 14.4 seconds; *The Funhouse*: 9.8 seconds; *E.T.*: 6.9 seconds; *Jurassic Park*: 9 seconds; *Poltergeist*: 9 seconds. In other words, the average length of a medium long shot in *Poltergeist* is closer to the two Spielberg films, and is shorter than both of Hooper's films. The medium long shots in the two Hooper films average out at 12.1 seconds, and at 8 seconds in the two Spielberg films. *Poltergeist*'s 9 seconds is closer to Spielberg's average and clearly shorter than Hooper's average, suggesting that his average length for the medium long shot, as for the medium shot, was influenced by Spielberg. It seems that Spielberg wasn't as successful at trimming the length of the long shots in *Poltergeist*, for they average out at 17 seconds. We have already seen that Hooper uses far fewer long shots than Spielberg, making the small number of long shots a Hooper trait. Perhaps Spielberg recognized that Hooper used so few long shots that he (Spielberg) was reluctant to trim them in the editing room. He was not, however, reluctant to trim Hooper's medium and medium long shots.

## Conclusion: Did Spielberg Ghost Direct *Poltergeist*?

On the basis of evidence extracted from the film, and contrary to widespread industry and press rumour, Hooper *did* demonstrate a sufficient amount of control over the style of *Poltergeist*, at least in the pre-production and production stages. Spielberg no doubt made specific suggestions (in addition to much of the content, he surely recommended filming at a low camera height; to film some scenes in a long take, such as the parents watching television in their bedroom at night – a shot that lasts 96 seconds; use an analytic cut-in on Robbie's clown to make it more scary). However, in the film's *overall* style, *Poltergeist* shares several traits with Hooper's other films (except low camera height). *Poltergeist* deviates from Hooper's style primarily in the post-production stage of editing, where large scale shots have been trimmed to fit Spielberg's style, except for the long shot, whose number are so few that they were not trimmed in the editing room. Hooper's claim that he designed fully half the shots in *Poltergeist* may even be an understatement, and the observation that Hooper did not supervise the film's editing, but that Spielberg did, rings true.

My conclusions run counter to the widely-held belief – one I also held before analysing the film – that *Poltergeist* should be added to the list of films directed by Spielberg. On the strength of my statistical style analysis, *Poltergeist* is a film directed by Tobe Hooper.

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## Appendix 1: The Statistical Style of *Poltergeist*

270 shots (first 30 minutes); ASL: 6.7 seconds

41% of the shots are reverse angles

5% are low camera angle

12% are high camera angle

53% are at low camera height (at or below a child's eye level)

85% of the shots are still, 15% are moving

Out of the 15% of moving shots, 8% use panning, 7% use tracking, and 1% craning. In terms of the direction of the camera movement, 8% involve side-ways movement, 2% upward, 3% backwards, and 2% forwards.

### Shot Scale

BCU: 2% of all shots; Average length of each BCU shot: 2.5 seconds

CU: 19%; 3.3 seconds

MCU: 34%; 5 seconds

MS: 20%; 6 seconds

MLS: 10%; 9 seconds

LS: 7%; 17 seconds

VLS: 8%; 7.6 seconds

### Shot Duration

53% of all shots fall within the 1-3 second range;

69% within the 1-5 second range;

85% within the 1-10 second range.

Shot duration skewness value: 5.5

### Correlation of Shot Scale and Duration

When we correlate shot scale with shot length, we end up with the following figures for the amount of time each type of shot remains on screen during the first 30 minutes:

BCU: on screen for a total of 15 seconds (1% of the time)

CU: 2 minutes 53 seconds (10%)

MCU: 7 minutes 36 seconds (25%)

MS: 5 minutes 27 seconds (19%)

MLS: 4 minutes 16 seconds (14%)

LS: 5 minutes 20 seconds (18%)

VLS: 2 minutes 40 seconds (9%)

## Appendix 2: The Statistical Style of *Salem's Lot*

254 shots (first 30 minutes); ASL: 7 seconds

68% of the shots are reverse angles

14% of the shots are at a low camera angle

10% of the shots are at a high camera angle

29% of shots are at a low camera height

83.5% of the shots are still/16.5% are moving

Out of the 16.5% of moving shots, 7.5% use panning, 9% use tracking, and 0.5% crane. In terms of the direction of the camera movement, 11% move sideways, 0.5% move down, 3% backwards, and 2% forwards.

### Shot Scale

BCU: 2%; Average length of each BCU shot: 3.1 seconds

CU: 24%; 3.6 seconds

MCU: 33%; 5.3 seconds

MS: 17%; 9.3 seconds

MLS: 7%; 14.4 seconds

LS: 6%; 8.7 seconds

VLS: 11%; 8.7 seconds

### Shot Duration

46% of shots fall within the 1-3 second range;

64% within the 1-5 second range;

84% within the 1-10 second range.

Shot duration skewness value: 5.6

### Correlation of Shot Scale and Duration

BCU: on screen for a total of 19 seconds (1% of the time)

CU: on screen for 3 minutes 40 seconds (12 % of the time)

MCU: 7 minutes 32 seconds (25% of the time)

MS: 6 minutes 50 seconds (23% of the time)

MLS: 4 minutes 6 seconds (14% of the time)

LS: 2 minutes 11 seconds (7% of the time)

VLS: 3 minutes 54 seconds (13% of the time)

## Appendix 3: The Statistical Style of *The Funhouse*

240 shots (first 30 minutes); ASL: 7.5 seconds

38% reverse angle shots

9% low camera angle

8% high camera angle

33% low camera height

81% of shots are still, 19% are moving.

Out of the 19% of moving shots, 7% use panning, 10% tracking, and 1% crane. In terms of direction of camera movement, 9% involve sideways movement, 2% upwards movement, 1% downwards, 2% backwards, and 5% forwards.

### Shot Scale

BCU: 8%; Average length of each BCU shot: 3 seconds

CU: 13%; 3 seconds

MCU: 36%; 4.8 seconds

MS: 20%; 9.5 seconds

MLS: 11%; 9.8 seconds

LS: 5%; 20 seconds

VLS: 7%; 8.8 seconds

### Shot Duration

45% of all shots fall within the 1-3 second range;

63% within the 1-5 second range;

83% within the 1-10 second range.

Shot duration skewness value: 4.1

### Correlation of Shot Scale and Shot Duration

BCU: on screen for a total of 56 seconds (3% of the time)

CU: on screen for 1 minutes 40 seconds (6% of the time)

MCU: 7 minutes (23% of the time)

MS: 7 minutes 27 seconds (25% of the time)

MLS: 4 minutes 16 seconds (14% of the time)

LS: 4 minutes 26 seconds (15% of the time)

VLS: 2 minutes 30 seconds (8% of the time)

## Appendix 4: The Statistical Style of *E.T.*

288 shots (first 30 minutes); ASL: 6.25 seconds

35 % of the shots are reverse angles

9% of shots at a low camera angle

18% of shots at a high camera angle

49% of shots at a low camera height

74% of shots are still/26% are moving

Out of the 26% of moving shots, 9% use panning, 15% use tracking, and 3% crane. In terms of the direction of the camera movement, 15% involve sideways movement, 3% upward movement, 1% downward, 2% backwards, and 5% forwards.

### Shot Scale

BCU: 6% of all shots; Average length of each BCU shot: 2.7 seconds

CU: 16%; 3.6 seconds

MCU: 26%; 5.1 seconds

MS: 17%; 5.2 seconds

MLS: 10%; 6.9 seconds

LS: 15%; 9 seconds

VLS: 9%; 9 seconds

### Shot Duration

41% of all shots fall within the 1-3 second range;

66% fall within the 1-5 second range,

86% within the 1-10 second range.

Shot duration skewness value: 2.7

### Correlation of Shot Scale and Shot Duration

BCU: on screen for a total of 50 seconds (3% of the time)

CU: on screen for 2 minutes 45 seconds (9% of the time)

MCU: 6 minutes 38 seconds (22% of the time)

MS: 4 minutes 10 seconds (14% of the time)

MLS: 3 minutes 28 seconds (12% of the time)

LS: 6 minutes 39 seconds (22 % of the time)

VLS: 4 minutes 11 seconds (14% of the time)

## Appendix 5: The Statistical Style of *Jurassic Park*

252 shots (first 30 minutes); ASL: 7.1 seconds

36% of shots are reverse angles

11.5% low camera angle

7.5% high camera angle

42% low camera height

74% are still/26% are moving

Out of the 26% of moving shots, 13% use panning, 10% tracking, and 2% crane. In terms of the direction of the camera movement, 17% move sideways, 3% move upwards, 3% move downwards, 1% move backwards, and 3% forward.

### Shot Scale

BCU: 4%; Average length of each BCU shot: 4 seconds

CU: 9.5%; 5.6 seconds

MCU: 28%; 4.5 seconds

MS: 21%; 6 seconds

MLS: 14%; 9 seconds

LS: 13%; 11.6 seconds

VLS: 11.5%; 8.5 seconds

### Shot Duration

35% of all shots fall within the 1-3 second range;

54% within the 1-5 second range;

80% within the 1-10 second range.

Shot duration skewness value: 2.68

### Correlation of Shot Scale and Duration

BCU: on screen for a total of 36 seconds (2% of the time)

CU: 2 minutes 15 seconds (7.5%)

MCU: 5 minutes 20 seconds (18%)

MS: 5 minutes 9 seconds (17%)

MLS: 5 minutes 16 seconds (17.5%)

LS: 6 minutes 23 seconds (21%)

VLS: 4 minutes 7 seconds (14%)