Something old, something new: CMM and mass communication

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ABSTRACT

This essay introduces a new version of the CMM analytic model. The new model is compared to alternative revisions of it introduced by Barnett Pearce. This essay develops a way of using the new model for research on mass media use.

Vernon Cronen and Barnett Pearce began working together after an event that occurred during a seminar they were team teaching in 1975. An hour into the seminar they came to a point of disagreement and had difficulty articulating what differentiated their positions. One graduate student, Linda Harris, said they should go off and decide what the impasse was and return in 20 minutes. That started their collaboration. The pattern of working separately, disagreeing, then integrating ideas typifies their long working relationship and provides context for reading this essay. While the reader will find differences between the ways they have been developing CMM, that should be read as a phase in a pattern that has made CMM challenging for them and, hopefully, provocative for you.

This essay is organized into two parts. The first part is focused on the CMM analytic model and presents a revised version of it. In the course of that discussion some differences between Cronen’s and Pearce’s ideas are addressed, and some theoretical clarifications are offered. The second part introduces a new area of application facilitated by the revised model: mass communication.

The revised heuristic model

The analytic model is an important tool in CMM. It is a heuristic device suggesting places to look to collect data, ways to organize data as systemic hypotheses, and possible courses of intervention. The revised heuristic model is shown in figure 1. It was first presented by V. Cronen at a KCC International Summer workshop in July, 2003.

Many older features of the analytic model are retained including a hierarchy of stories that organize persons’ grammatical abilities for acting into the moment. The markers ¬ are borrowed from G. Spenser Brown (1972) to show higher and lower-level stories. It indicates grammatical relationships between stories such that the higher story contributes more grammatical features vital to the coherence of the lower story than the other way around.¹ There is no natural or universal order and no universal set of stories. The hierarchical ordering of stories persons use and their relationships must be determined in the course of inquiry. These stories include such topics as autobiography, relationships, the evolving episode of social action, the character of a

¹ They have not for some time been used to indicate an inside – outside relationship as Brown intended.
Hierarchically ordered stories about episode, self, relationship, etc. making up grammatical ability in use.

work group or organization, etc. The hierarchical ordering as well as the content of stories can change in the course of an episode of conjoint action. The model is arranged to show how the actions of each conversant enter into the creation of the context for another’s action.

The most visible difference between the new model and earlier versions are in the three elements under the lowest context marker \( \land \). In earlier versions they were written as follows:

\[
\text{Antecedent } \supset (\text{Deontic Operator (Action)})p \supset \text{Consequent}
\]

“Antecedent” was a person’s story about what another conversant was saying/doing just prior to one’s own action including other features of the immediately prior conditions. “Action” referred to a person’s short story of his or her own action including feelings and movements. “Consequent” directed attention to the same person’s short story of expected and/or desired response from the other. Deontic Operator indicated the degree of moral force, or the constraints and affordances bearing on a particular action. The subscript “p” was used to indicate position.
Shotter (1984) observed that we think, attend, and recall as well as act differently depending on whether we are in a third – person observer position or in a first or second person role and depending on the voice with which we speak (e.g.; one’s own voice, the voice of the community, the voice of the family, etc.).

From separate acts to internally related ‘short stories.’

The new model eliminates the logical symbol $\supset$ (read “if ___, then ___”) replacing it with a simple dash to show connection. The e symbol implies sharp, unidirectional distinctions among three short stories. The original model was useful for keeping a sense of give and take within the temporal flow of talk and that is retained in the new model. However, such sharp distinctions blurred the co-evolution of these features. Co-evolution involves an understanding long employed in case work—namely, that the meaning of one such element enters into the formation of the others. The simple dash mark is retained to indicate the usefulness of making each of the three elements temporarily determinate for the purposes of inquiry (Dewey, 1938; Cronen and Szivos, 2001; Cronen, 2001).

This change followed the case work. Peter Lang and Elspeth McAdam (personal correspondence) have been for some years emphasizing the importance of the future dimension of stories about relationships, working groups, organizational arrangements, etc. They might ask, for example, “What story would you hope management would tell about your working group five years from now?” Here, they deliberately reverse temporal order, attempting to reframe various parts of a story by reframing its account of the future. The new model allows us to move that idea to the smaller scale stories about the details of conversation. Theoretically, speaking, it has always been the CMM position that “Actions” can co-evolve with consequents. Persons do not always interpret, then choose action, and then consider consequences in a move-by-move mechanical way. Without the one-way movement of discrete elements implied by the Russell – Whitehead symbol, one is free to explore creative change in any of the three short stories by reframing a third. For example, consider the husband who uses the story that to be a good husband he must move quickly to suggest solutions for problems his wife reports. When she says, “My boss puts me in a difficult position with respect to my own subordinate,” he understands this as a call for help in finding a solution. He responds as quickly as he can with what he calls, “hopefully useful suggestions.” He hopes he will hear in response an acknowledgement of his effort and perhaps thanks for a good idea. What he expects and usually gets is a plea that he “just listen.” Of course, two places to intervene might be his relational story, or a still higher level story of manhood. One might also try to change the husband’s stories about his possibilities for action and his wife’s utterance by changing ideas about a desirable response. For example, “Suppose you were a new husband who did not know much about his wife’s work situation, but wanted to be helpful. What kinds of responses would that husband hope to hear from his wife?” “What might he hear in your wife’s response?” “What might he do to get such a response?”

2 That was little “horseshoe” on its side. The symbol comes from the work of Russell and Whitehead (cited in Casti & DePaul, 2000).
Extending the application of the position symbol “p”.

In the earlier model the “p” symbol was applied only to the story of a person’s own action. However, in case work it became useful to apply it to all three elements. In the previous example, one might reframe the husband’s story of his own action by reframing the position from which he listens to his wife. For example, “Suppose someone who did not know you or your wife very well overheard what she said. What might that 3rd party notice about what your wife said?”

In other situations a person specifically seeks a response from a particular position as when we want a person in authority to respond as the voice of the organization rather than offer a personal apology.

New descriptions of the “short stories.”

It would be only partly right to say that the short story to the readers’ left in figure 1 can be given the old shorthand label “antecedent.” The new description emphasizes the continuity of what a person understands with stories of his or her own actions and expectations. It also accounts for the overlapping of these stories such that one is not wholly antecedent to the other. The older term “action” will do if it is understood to be one feature of a co-evolving act that embraces understanding the immediate events, acting into them, and anticipating responses.

The new descriptions continue the movement away from the old idea of “speech acts.” Mead (1938) claimed that all features of the act can be found in a perception. Persons learn how to perceive in ways appropriate to the situation. Perceiving is an action not a simple response, and we perceive as we do in order to go on into the future. With that in mind we turn to the CMM short stories that involve more than perception. The “Antecedent,” for example, becomes in figure 1 a story about one aspect of the integrated act. It involves learning what to look at, how to focus on relevant details, what to remember, and how to emotionally/aesthetically respond. That learning is not isolated from other aspects of the act including stories of one’s own action. Both are in the service of “going on” into the future. This does not mean that the relationships among the 3 short stories are learned as lock-step connections such that any change in one must immediately affect the others. That account would be more consistent with the wired-in sociality of bees than with the complex and flexible interactions of people.

The new descriptions better reflect a Systemic - Pragmatic understanding of interaction. Suppose the formation of a story about immediate conditions is clearly identified as something a person does. In that case the “action story” can overlap events prior to overt action. When we are angered by someone’s action, that feeling does not abruptly end when we start to formulate a response. Indeed, thinking, feeling, focusing, perceiving and remembering may be all there is to one’s action, there being no overtly observable behavior at the particular time. CMM (Pearce & Cronen, 1980) has always claimed that action is typically constituted along with ideas about desired and expected responses. However, continuity does not mean a seamless whole without distinctions. A client can tell an identifiable story about the circumstance he or she is acting into including another person’s utterances. That client may tell another identifiable story about how he or she is acting into the circumstances (by what is perceived, felt, understood, enacted, etc)

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3 This is, of course, a move based on changing “person position.”

4 By older ideas is meant here not only Searle’s idea of Speech Acts which CMM never endorsed, but also the notion of speech acts developed by Pearce (1989).

5 For a fuller account of this see the discussion of “mosaic evolution” in Cronen & Szivos, 2001.
and a third story of anticipations. *Moving the focus of inquiry from one of the short stories to another is a shift in the inquirer’s orientation.* It is not always, though it can be, a shift to a focus on different moments in the conversation.

The term “consequent” in the older model does not seem to need a new description although the term “response” may be more “user friendly.” It does need to be understood in a way that is temporally bounded. Of course, as one listens and speaks, he or she may be, at the same time, constructing desires and anticipations. Consider this exchange: “When did you first start to think that your trainee was going to try to get someone else to do his work?” “As soon as he started to tell me about how busy he was, I knew I had to say something that would get him to accept responsibility.”

**Atoms and snakes or hierarchies?**

In his 1989 book on interpersonal communication, Pearce introduced two models as substitutes for the hierarchical model. He named them the “Atomic Model” and the “Serpentine Model.” The atomic model places the “act” at the center of the model. The “act” is shown as nucleus surrounded by stories that circle it like electrons. Several atomic models string along a serpentine path representing the temporal flow of action from one conversant to another. To many learning CMM this suggests a split between action and thought inviting the separate analysis of each. Obviously, that is not what Pearce intended. Another advantage of the model in figure 1 is that it clearly points to the way constraints and affordances are co-created in action as one person takes into account the actions of another in ways that are informed not only by prior understanding, but also by the on going joint action. It does this by differentiating aspects of an act for attention.

The case for the hierarchical features of the model, originally Pearce’s creation, rests on whether it useful to highlight which story is more dependent on the grammatical features of another for its coherence. For example, It may be very important in practice to know that a manager’s stories about the unique character of her organization and how to manage in that organization provide the crucial ideas in which her identity story is forming.

Both Pearce’s and Cronen’s models are intended only to describe those aspects of persons’ grammatical abilities as used in the moment. The models refer to some phases in what Dewey called (1896) “forming coordinations.” When we say that a father uses an autobiographical story in an episode with his son, we do not mean that we have heard all of father’s detailed and nuanced grammatical abilities related to what we would call for our purposes his story of autobiography.6

**Logical forces: additions and refinements.**

Not shown in the figure 1 model is CMM’s conception of “Logical Forces” within the model. The original set of four logical forces direct attention to particular grammatical connections. They are “Prefigurative Force,” “Practical Force,” “Reflexive Needs,” and “Reflexive Effects.” Prefigurative force directs the inquirer to the moral force of connection between the higher level stories and the antecedent story on one hand, and a particular Action story on the other. Practical

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6 This illustrates why Wittgenstein used the suggestive term “grammar.” When we form a sentence we never use all of our grammatical abilities. We use those that allow us to act into the moment.
Force directs attention to the constraints on action due to the desired consequent. Reflexive Needs raises the question of how higher-level stories are dependent on particular responses from the other. Finally, Reflexive Effects directs attention to the effects of another’s responses.

Once CMM made the move to using stories rather than propositions, constructs or “contracts,” it follows that all grammatical connections between and within stories carried logical force. Participants in KCC International’s 2003 London Summer Workshop were very helpful in pointing this out. However, in practice the “logical forces” have remained heuristically powerful.

Although it is useful to retain the notion of logical forces as earlier conceived, case work suggests two additional topoi of the same sort. A number of practitioners at the KCC workshop in 2003 said that they think of logical force as a general term directing their inquiries to all the connections of the system. That is absolutely right. The idea of identifying specific kinds of connections as logical forces can only be a sorting out of some for attention. So, first, a little house keeping. Logical force refers to the rules created in social interaction that make for the coherent ability to go on. Together they constitute the affordances and constraints co-constructed in a system.

Let us call the internal grammar of each story (including its nonverbal features) “Cohesive Force.” Peter Lang has been especially helpful in calling attention to the importance of questioning about the future dimension of stories (or about the absence there of) as a crucial aspect of logical force. Indeed, much of our exploration of a system has long been focused on the internal coherence of a story (Cronen & Lang, 1994).

The very act of expression in any form amounts to the substantializing of abilities in a particular way under particular conditions. For this reason, some change is going on every time a person acts (see Cronen, 1995). In a recent essay Cronen, Lang, & Lang (in press) called this mutual adaptation and accommodation of thought, feeling, modality of expression, and behavior “Pubstantializing Force.” From a communication perspective, we do not put ready-made ideas into a particular medium such as print, oral expression, gesture, etc. We avoid “interviewing into a pathology” (Lang, 1985, personal communication) and avoid extended engagement in “problem talk” because to do so invites further development of problematic stories under the requirement to tell them. The modality of an expression is also continuous with thought and feeling (Ong, 1989). This idea has a long history as part of a systemic therapist’s tool bag. For example, a client may be asked to write a letter to a specific person. This is useful because people think differently in order to act in a different way. Thus, the modality of communication influences thinking and feeling, just as thinking and feeling can influence the choice of modality.

The moral operators in the new model.
The revised model in figure 1 uses the symbol “MO” for “moral operator” rather than “DO” for deontic operator to avoid haggling over what “deontic” logic is. The reader may recall from

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7 The idea of “contracts” like that of “constructs” were distinctively bad ideas. Both were mine. The former lacked detail, feeling, and any sense of the future. The latter term was a hold over from old cognitivist ideas and was completely inconsistent with the rest of what was developing.

8 CMM aids the inquirer in probing the degree and kind of affordance and constraint by thinking in terms of Moral Operators.

9 The notion of deontic logic begins with the philosophy of Kant. Bentham used the term quite usefully to indicate that which behooves, in other words, a sense of duty. However Hegel’s original meaning was a sense of duty independent of others’ responses, and that is not what we mean at all. Dewey’s ethical ideas usefully situated the sense of duty in the dynamic tension of thought-in-action-with-others (see Dewey, 1903, 1915 and Welchman, 1995).
earlier treatments of CMM four pairs of terms suggesting different qualities and degrees of moral force: obligatory - caused, legitimate - probable, unknown - random, and prohibited – blocked. The use of these terms extends and develops Dewey’s idea of “habit” and Wittgenstein’s (1954) idea of “rule” by wedding the idea of normative force to a human systems perspective. These etic terms summarize the degree and nature of logical force bearing upon persons in joint action. It is also useful to consider those situations in which persons disclaim choice and claim to be acting in a way that is outside of their control. The operators “caused,” “probable,” “random,” and “blocked” alert the inquirer to such situations.

Space does not permit a full treatment of Moral Operators and logical force in this essay. However, Pearce and V. Cronen are each moving to a more detailed understanding of moral logic. This essay provides a place to share some of this thinking. Based on past practice and research, the logical operators are a good starting place. They invite asking, “How narrow are the constraints and affordances at a moment of joint action?” and “Does the person experience control of his or her action? However, after these initial judgments further considerations need to be addressed to understand the management of moral order. They are: (1) A person’s range of abilities at a moment of action; (2) The degree of logical force operating on a particular form of action; (3) Consciousness of and reflection about connections among and within stories; and (4) The temporal organization of consciousness, reflection, and action. Let us illustrate these by reference to three of the logical operators, “obligatory,” “caused,” and “legitimate.”

Suppose a father only knows one way to stop a child from disobeying, say, threatening. So long as the father believes he must elicit obedience he threatens. The father need not be conscious of the connection at the moment of action and does not reflect before acting. In CMM terms, however, the inquirer would still think of this as “obligatory” if the father can later report the connection between his action and his story of fathering. What the father may need here is an enlarged repertory of responses. On the other hand, the father may have reflected on his choice. He may have thought to himself, “If I do not act I am failing to do what a good father must do. I will begin living the easy life of an uninvolved parent as my own father lived it.” He may see no other way to live the preferred story than to engage by shouting and threatening. Perhaps what is needed here is to join in creating a parenting story that would accommodate alternatives.

Now suppose the father says, “My kid makes me angry and that’s what I always do.” In CMM terms the moral operator would be “caused” so long as the inquirer thinks this is an honest report. It would then be interesting to know what story may be used by the father at that time and why it is functional for him to be unable to report it even for himself. It may be appropriate to try to create conscious connections between actions and the father’s stories.

The case of “legitimate” action is most interesting because it gets deeply into the notion of freedom. Suppose the complexity of the stories used allows for a number of coherent, responsible
ways of acting. Of course, the person in conversation can only take one course of action at a time. But that does not mean she or he cannot later tell a story of connections to other possibilities that were coherent and responsible and which might be tried in the future. The course of conversation among persons may also have the reflexive effect of generating more complex, nuanced context for opening new possibilities. Perhaps this is the difference between the joint action of free inquiry and ideological communication that reduces possibilities to an obligatory correctness.

Readers will notice in the new model that the designator (MO) appears before all three short stories comprising the act. This is because inquiries about obligations, legitimations, prohibitions, blocks, and the like can be differentially addressed to each of the three short stories. For example, suppose a therapist asks the mother of a 13 year old daughter this question about a recurrent episode of conflict: “You say you notice a bit of rebellion in your daughter’s talk about freedom and growing up. You have a good ear. Besides rebellion, what else do you hear in what she says?” Mother answers, “You have to listen for the rebellion. There is so much for kids to get into, -- the drugs, the sex --. You can’t let down your guard.” This could be important data. Perhaps the mother rejects considering other aspects of her daughter’s utterance because her story about being a good mother obligates one way of listening to her daughter. The mother may, however, know several legitimate ways of responding to what she understands as rebellion. Suppose the therapist asks the mother what she hopes will be her daughter’s response to her interrogation about drugs, sex and friends. The mother answers, “I don’t know, but I really fear she will walk out of the house and do ---God knows [tears].” It would then seem that for the mother there is one sort of response, leaving home, she is prohibited from eliciting.

Back to the future: CMM and mass communication

From the start of their work together Pearce and Cronen were concerned with the achievement of unified communication theory. The ideas that follow suggest ways of extending CMM to embrace the temporal process of mass communication.

The toughest problem in applying CMM to mass communication has been how to deal with the temporal process of using mass media when there is no change in the media performance responsive to the actions of the viewer. Indeed, the viewer may exhibit few overtly observable actions at all. This is an important concern because the mass media play an important role in the everyday lives of people. This is particularly important as children spend more time alone watching television learning ways of talking, moving, dressing and much more. Indeed, we suspect that children are also learning emotions from the media.

The variable analytic study of “media effects” has mired in confusion. There has been little progress in the search for “variables” that predict effects. The old saw about television violence still generally holds: It affects some people, sometimes, under some conditions. Education does seem to mediate the effects of TV violence but it is not clear how. For example, Gerbner’s Cultivation Theory says that more television viewing has effects -- because it does (see Gerbner, Gross, Morgan, & Signorielli, 1994).
With the new CMM analytic model it is possible to understand the consequentiality of mass media in the communication process. It does not make sharp temporal distinctions between the story about the immediate condition into which one is acting, and the stories about what one is doing and expecting/desiring. Ways of understanding and anticipating are dimensions of the act. As in the older model, the notion of acting is not treated as something different from feeling and thinking. Our stories about the immediate circumstances into which we act with our grammatical abilities raise anticipations of future events and how to focus on them. Reflexively, anticipations and hopes about the next event, when supported or disconfirmed, may affect the larger stories of what is going on in the media presentation and other related stories we use in life. We can, with the new model, conceive of the integrated act as sometimes excluding a story about the viewer’s overt observable action.

Consider children watching professional wrestling. The details here presented are a composite of several casual opportunities for observation provided by students of the author. An eight year old boy is home alone watching professional wrestling. The wrestlers wear costumes and enact crude morality stories while obeying few traditional wrestling rules. Their moves are predetermined and practiced. The eight year old has watched many times before. He knows the characters and how episodes go. In the match he is watching, wrestler X is the “bad” wrestler and Y is the “good guy.” They have strutted around the ring, insulted each other, and have thrown each other around a bit. Wrestler Y springs off the ropes and knocks X over the ropes out of the ring. Y, the “good guy,” turns his back on X and lifts his arms in triumph to the applause of the crowd. Figure 2 offers a partial hypothesis about what happens in the episode. Let us start with the observable events described in italics in figure 2.

Wrestler X comes back through the ropes holding a folding chair and hits Y over the head with it. Wrestler Y, for no explicable reason, is not looking. The eight year old has a short story about these events which he tells with some animation. He says, “That dirty X snuck up on Y when he wasn’t looking!” Returning to the italicized observables, the boy rises from his chair and mutters, “Aw shit!” as wrestler X struts around the ring insulting Y and the crowd. Now the boy sits down, but on the edge of his chair. These observable events happen simultaneously so they are bracketed together in figure 2. Returning to the boy’s stories, inquirers ask him how he was feeling at that point. He says, “I hate that X, he’s a sneak.” They ask him, “when did you start to feel hate? He responds, “as soon as I saw X with the chair I knew what he was going to do.” The inquirer asks, “You seemed to get angrier, when did you feel your anger the most? Was it when X hit Y?” “No, it was more when X was walking around and pointing to himself and insulting everyone.” As the interview proceeds the inquirer finds that the boy expects X will stomp on Y when X sees Y stirring. However, the next observable event in the match is when Y suddenly leaps to his feet, hits X with his fist, picks up X, spins him around and throws him out of the ring again. Y again raises his arms to the crowd. Suppose the boy tells this story about the most recent events: “It was great! He really got ‘em back, that sneak!” The boy says he feels, “Excited, great, my Man!” The inquirer asks, “when do you think wrestler Y felt the best, the most manly?” The boy answers, “After he threw that guy out of the ring, when he pointed to himself, and the crowd screamed for him.”
Family and church stories about good and evil.

**Episode: Good wrestler and bad wrestler battle for supremacy.**

**Autobiography: Boy trying to become a man.**

**(obligatory) Bad guy sneaks up when y isn’t looking. No fair... 3rd person**

**(caused) I’m gett’n real mad. I hate that sneak. 3rd person**

**(legitimate) y is going to get stomped. I wish he’d get up but he’s hurt. 3rd person**

**(obligatory)**

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**2nd person**

*See – he got ‘em. great, powerful.*

**1st person**

*This is how a man feels.*

**3rd person**

*I wish he’d get up but he’s hurt.*

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*X comes from outside the ring and hits Y with a chair when Y is not looking. Y falls to canvas.*

*X Struts around ring and taunts crowd.*

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**Y rolls over quickly, takes X down by ankles, picks him up and throws him out of the ring again.**

**Y walks around the ring holding up his arms and points to himself as crowd yells approval.**

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*X is slowly dragging himself back into the ring. Y sees him. The crowd continues to yell and cheer for Y.*

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**Episode: Good guy getting bad guy, good guy will win.**

**Autobiography: I can feel the way a man does**

**(obligatory)**

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**2nd person**

*(caused) I feel great, powerful.*

**1st person**

*This is how a man feels.*

**3rd person**

*I feel great, powerful. This is how a man feels.*

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*Boy rises from chair leaning forward. “Aw shit... You___!*

*Boy stands up, shaking fist. “Yeah, yeah, my man!”*

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*Y walks around the ring holding up his arms and points to himself as crowd yells approval.*

*X is slowly dragging himself back into the ring. Y sees him. The crowd continues to yell and cheer for Y.*
What could be learned from this sort of analysis? The boy has learned how to get into identifiable emotional roles (Averill, 1980). Inquiry based on this model could give insight into the connections between emotions and moments in the process of episodic development. It would be very interesting if the most thrilling point is not when the wrestler defeats the other, but when he struts before the crowd. There are interesting connections here. Consider the moment when the episode on television does not go as expected and the hero wrestler recovers and wins. This changes the episode development and reaffirms a story about morality in which the right wins through greater force. There is a morality tale, a pattern of “sneaking up” being surprised, recovering and self assertive exaltation. These feelings and actions are part of a grammar that perhaps includes a developing story of how to be a real man – not just in talk, but also in feeling, action, and public response. The boy has to have learned how to perceive and recall in certain ways to participate in the episode. He learned not to focus attention on or remember the curiously long pauses between the choreographed bits of action – pauses so long that any real wrestler would easily counter his opponent’s efforts. The boy uses the words, “my man.” How might that be integrated into the grammar of violence, morality, and exaltation and manhood? Is the boy learning the joy of violence in a kind of episodic action? Thinking in terms of aesthetics, wrestler Y’s exaltation may provide a powerful consummatory moment (Cronen & Szivos, 2001) that integrates stories from many experiences about strength, violence, heroism, manhood, and the boy’s developing identity.

We may well wonder how the boy learned to do this all this. Perhaps he learned while watching with a parent, older friends or siblings. He watches their responses to what is on the screen. He may also have learned by more direct instruction in the form of others’ directions like, “look, look, he doesn’t see the other guy!” These ways of acting into the television event are not “natural.” They are learned with others in a cultural context.

And so...

It is the author’s hope that the new heuristic model will provide not only a more useful teaching tool, but also a source for new ideas and applications. Ever since the author first developed the interactive model for CMM in 1978, he has had the feeling of being alternately dragged by it into new applications, and as a consequence of its use, required to adjust and improve his little device. Please join him in this, it has been useful fun.

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References


