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ON THE VIDEO MEDIUM WITH REFERENCE TO LANGUAGE AND THE TEACHING OF LANGUAGE

E. M. CARMICHAEL

1. Introduction

The introduction in the late 1960's of video tape-recorders and cameras designed for non-industrial applications made it possible for anyone willing to meet the purchase price to convey information in a form the structural nature of which, though revolutionary in its implications, has been ignored or misunderstood, not least by that component of our society which stands to lose most by such failure, namely the educational institution. In the study to follow it will be our objective to describe that form in its specificity; in its relations to analogous forms of communication, i.e., in its non-specificity; in its emergence as a factor in cultural processes; and finally, in its range of applications as these relate, first, to language teaching, and second, to the construction of language teaching programs.

2. Defining the Video Medium

In view of the above-mentioned objective it is appropriate to establish at the outset a working definition of what is meant when we speak of 'video' and 'video hardware.'

The video tape-recorder (VTR) is an electro-mechanical device capable of (1) encoding and decoding films, video tapes, and television broadcasts; and (2) encoding and decoding the signal output of a video camera. The information so processed is composed of elec-
tronic impulses capable of providing an audio and visual composition, thus permitting users to receive and produce visual images accompanied by a soundtrack. Video equipment therefore encodes in audio-visual form 'old' information contained in films, previous video recordings, and television broadcasts; and it encodes 'new' information whenever it receives electronic data relayed by a video camera. The same video tape may be used in both recording instances, so that it is always possible to intercalate 'new' and 'old' information on a single and self-contained video tape module (i.e., a magnetic type in cassette-reel format, available to the non-industrial user in widths and lengths that approximate those used in sound-recording). The recomposition (repositioning) of impulses is executed electronically on an editing console, and the result achieved by the editing of visual information is said to be a 'second generation' recording. This recording/editing equipment and tape-format, and also the video-screen on which the video picture is received and monitored, constitutes video hardware.

The term video will have for us two significations, neither of which stands in isolation since, as we shall see, certain features of its material and formal structure overlap and intersect. Video, taken with this reserve in mind, will refer (1) to video hardware in its totality; (2) to this hardware's utilization for program production (including closed- and open-circuit television); (3) to the form and content of material conveyed to the screen (program production and presentation); and (4) to the language of video: its reality as a combination and interplay of coded units—those components which permit one to speak of a language, however restricted, in the first place—which are primarily, but not exclusively, audio-visual. It is the textual signification indicated by (4) that will justify our treatment of video as an object of semiotic analysis. As the context will make clear, reference to the electronic code or impulse pattern transmitted and received by video hardware does not imply analogy.
with the codes and registers of expression which constitute the objects of semiotic analysis.

Upon its appearance in the non-industrial market, video summarized at once the methods available to and employed by media-communications, synthesizing the implements of information gathering and conveyance into a single system. The sum was indivisible. It could not be fractioned in its methods of information production nor in its technical constituents. The video system synthesized internally. For it was, and remains today, an agent capable of performing such non-specialized functions as speaking (producing and reproducing speech), showing, interrogating, recapitulating, portraying and retrieving human response, and testing that response.

In brief, the video agent could produce, reproduce, sequence and combine human and/or abstract units of information. It sequences and combines the elements of this performance according to the design formulated by the human programmer. The printed text, the photograph, the sound-recording, the motion picture film, the theatrical and television production, and the external historical event had, as it were, been reconstituted as transferent powers: generative powers capable of reproducing permanent versions of themselves. Each member of this communications arsenal could be reduced, that is, to an audio-visual simulacrum of itself, and then processed for storage and retrieval in mediated space-time determinations.

If one should raise the objection that the static nature of the photograph or printed page compels us to recategorize the historical or theatrical event, we would respond that such an event is atemporalized in the video transfer (in fact, re-transfer). I am free to reinsert that event as a new fact within a new context not subject to the space-time constraints of the original event (or set of events). I am free, in other words, to temporalize the transfer as one more object in the world. Live television records the event, video re-records it. In this sense, live television is simply a vehicle, power-
less to redistribute the space-time determinations of the event being transmitted. The video re-recording attains the status of the permanent document while maintaining a decisive advantage over its ‘competitor,’ the documentary motion picture film, and it is an advantage conferred by video’s unique encoding capability: it is now possible to encode the motion picture in digital form designed for the dual function of permanent storage and/or immediate video-retrieval.

Thus the user of video technology, and the teacher in particular, has at his disposal a ‘hard’ communicatious system enabling him to project a video program to an unlimited audience, itself equipped to record that program with a minimum of inconvenience. It is relevant to mention here that the relative simplicity of operating video hardware designed for LL use allows us to record and monitor (and self-monitor) the learner’s performance (in the dramatic sketch and/or in audio-video exercises) in ways that approximate the procedural methods employed in the standard audio-equipped LL. In terms of the pedagogical demands that one would place upon a total communications system, the ‘hard-edged entry’ characteristics of the textbook and audio-tape facility apply to commercially available video hardware, specifically the video monitoring system and cassette module.

3. A Semiotic Description of the Language of Video

In view of constructing a semiotics of the language of video, let us focus our attention initially upon the differences that exist between film and television. Christian Metz, the French semiotician whose research into the language of cinema is so pertinent to a structural analysis of video, enumerates four types: technological, socio-economic, affective-perceptual, and programmatic.¹ The first

of these concerns the materiality of the unit transmitted, i.e., the video signal is electronic, not photogrammatic. Socio-economic differences concern the processes of production: in television the emitter is in most instances a public or state organ subject to administrative decision-factors unlike those that dominate the industrial structure of independent and commercial cinema production. Affective-perceptual differences relate to the first type. The television viewer, who is 'distracted' rather than 'captive,' receives a program in a lighted, not darkened, room through (not 'on') a contoured screen (as opposed to the large, flat cinema screen). As for programmatic differences, one cannot say that what is viewed on television is structurally alien to the cinema. The quantitative differences are, however, clear enough: cinema relies almost exclusively on narrative structure, whereas television has always produced a great diversity of 'shows' (news, sports, situation-comedy, panel-discussion, etc.).

The features common to both cinema and television distinguish them from other media, i.e., the specific codifications associated with those features are very often identical. Camera angles, voice-off, pan and dolly camera movements, lighting effects, stylized sequence and narrative structures, montage techniques, etc. are immediately perceived as 'their' visual language.

Their precise use, their average frequency, their preferred context, etc. may vary from one to another, but they may also vary within the frame of each: it is a question of differences between sub-codes, not between language systems. In addition, still concerning usage, we know each day that cinema and television resemble each other and interact more and more.²

Their common physical character is defined by five sensory registers: the visual image, the musical sound, the sounds of speech, sound effects, and the form of graphic inserts (titles, credits, etc.). The usage made of this shared material support is precisely what con-

² Ibid., 238.
stitutes the cinematic and televisional discourse, their signature.

The search for useful conclusions based upon the analogous and contrastive elements drawn from the relationship of cinema to television raises two vital questions: What differentiates the cinematic from its historical and formal-material predecessor, the photographic art? How is one to explain the fact that a film produces an impression of reality so much greater than occurs when we look at a still-picture? Personal observation provides a good perspective from which to begin. The photograph I am looking at refers at once to the irremediable past. Wrested from an anonymous and lost history, and now inserted into my consciousness, it nevertheless delivers that past into my real perception. This ghostliness that attaches itself to the photograph cannot however be overcome by my present perceptual awareness: the reality of the pictured adheres to a dimension flowing between a 'here' and a 'then' which I organize into a unitary mental and sensory construct, though in the process I am never deceived into taking the photograph's illusionary world as reality.

Within this flow-dimension time (or process) exists a certain material bond that is broken (not "dissolved," as Metz claims) by movement. The higher degree of reality in film is imparted by movement, and it is a curious convention indeed that film analysts should feel so compelled to seek the essence of motion picture photography in the discrete frame itself, as if the animation of frames itself could account for a film's vividness. Movement takes place when the mere appearance of volume and perspectival aspect in objects is transformed into life. For despite the visual and auditory displacement involved in cinematic or televisional perception (the screen's rectangular dimensions, absence of binocular perspective, rephasing of the natural aural and ocular functions, etc.), movement

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breathes life into what in the photograph was hitherto an apparition, an equivocal approach to reality. It is important therefore to recognize the primordial character of movement. Being immaterial, it cannot, Metz argues, be reproduced:

In truth, one cannot even "reproduce" a movement; one can only reproduce it in a second production belonging to the same order of reality, for the spectator, as the first. It is not sufficient to say that film is more "living," more animated than still photography, or even that filmed objects are more "materialized." In the cinema the impression of reality is also the reality of the impression, the real presence of motion.

One can only deliberate upon the temporal dimensions of a photograph, which, opening itself to our view, figuratively unfolding before us, is by virtue of our deliberation—fastened to the still radiance of its object, the photograph—synthesized into a figurative display.

It is movement, too, that compels the film spectator to participate in the reality of a film by representing himself within the scheme of the action. Rather than identify with the film actor, he will move alongside actor-initiated movements, thus taking a very long step beyond simple identification. The dissociation experienced in the theatre, where the reality of illusion remains precisely that, an illusion that cannot be surmounted (whatever the degree of emotional intensity produced upon its audience), contrasts therefore with the participatory role assumed by the film spectator.

One of the pivotal concepts in Metz's discussion of the distancing phenomenon in theatre and the points of fall-off or reinforcement in our perception of the degrees of reality in the representative arts is 'diegesis,' which denotes the fictional universe signified by the

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4 On the subject of motion, objective space, and perception, see Maurice Merleau-Ponty, Phenomenology of Perception (London: Routledge-Kegan Paul, 1962), 142-144.

5 Metz, Film Language, 143-145.

6 Ibid., 12-13.
formal and concrete properties of the individual art, the signifiers. The methodology according to which a film or theatre director realizes his material and narrative objectives would then be termed 'diegetic.' If the significates of a spectacle's narrative structure, and reciprocally, if the structural elements brought to the stage or screen, instanced upon it, determine fictional properties, the power inherent in the representational vehicle to express the real possesses quite specific limits. A play denies us belief in what is dramatized because the theatrical vehicle is too real, too intrusive. One cannot conclude, however, that the unreality of cinema, its own world of apparition, produces the most vivid of impressions simply by virtue of a film's distance from the concrete real. If that were so, the static representations of the photograph or painting should produce a sense of reality greater than film:

The truth is that there seems to be an optimal point, film, on either side of which the impression of reality produced by the fiction tends to decrease. On the one side, there is the theatre, whose too real vehicle puts fiction to flight; on the other, photography and representational painting, whose means are too poor in their degree of reality to constitute and sustain a diegetic universe.7

In sum, the power of film to convince the spectator that what he is witnessing is real, depends on the primacy of movement and the poverty of the film image. Summoned as a witness to events partially of his own creation, of his own powers of imagination, the spectator navigates a course between two faces of reality: the depth and motion proper to a film's moving images, and the wealth of imaginary association by which he penetrates that film's diegetic universe.

Cinema is said to be a universal language, access to which is available to anyone whose faculties of perception function normally.

7 Ibid.
Now that we have dealt with cinematic discourse in relation to other representational media, in what ways can we distinguish it from language proper (natural language)? And if the language 'spoken into discourse' by the film director really deserves this descriptive category, in what terms would the latter be susceptible to further definitions that bear upon our objective of describing the language of video in its specificity and in its power to articulate meaning, notably for the purposes of teaching natural language? Crucial to our description of video as a specific type of discourse is contextualizing this discourse within the framework offered by natural and media-language phenomena and their modes of signifying.

The visual spectacle depends upon the junction of signifier and signified. In natural language the train of phonic substitutes never shares in the material existence of what is signified. The speaker of natural language literally uses his language, borrowing from the fund of its resources in ways that will make his utterances comprehensible to a fellow-user. This fund permits the casting of meaning according to codes represented by this fellow-user (who requires them for understanding) in the same way that the filmmaker (who knows in principle what he wishes to signify) creates his spectacle for film-users who represent (possess) a certain cinematic code. But while cinematic language is always partial, verbal language reconstructs human experience from end to end. In essence, the creation of film images and sequence—a complex segment of discourse—is hardly comparable to the usage wrought from natural language: the speaker takes from and combines, but does not invent, the elements of the language resource, in which the phoneme has no existence unless it is actualized (positioned) in a phonemic grid.

At once formal and prefigurative, the systemic foundation of a natural language—*langue* in de Saussure's scheme—possibilizes the codal variations to which it gives license. This foundation thus constitutes a language's anterior articulation, the articulation which,
as Metz has indicated, is lacking in the languages of the representative arts. It is precisely because of this lack that a representative art, such as the cinema, has no alternative but to invent from within its own resources the speech forms proper to it. Human phonic languages are by definition translatable, though it is impossible to determine to what degree a particular translation is successful. Not 'burdened with' the singular character displayed in a natural language and 'machined' into form by the laws inherent in its systemic foundation, image discourse exists as already translated into the languages of the world. In the wonderful phrase of Metz:

The height of the translatable is the universal.

Unlike natural language, the cinema functions without phonemic structures. It also functions without words, if we understand a word to be a potential code unit or, in linguistic terminology, a vertical syntagma. How, then, does cinematic expression resemble the speech act? A film speaks in image discourse: in nonverbal units composed of shots arranged by sequence. The shot is always differentiated, for no shot can ever be identical to another: the slightest readjustment of camera angle or lighting will redefine it in its entirety, and further, the number of shots possible is indefinite. It is therefore misleading to identify the shot with the word. The closeup of an aircraft as it appears on the screen does not signify the purely lexical item, "aircraft," but rather, "Here's an aircraft." That is, by actualizing this one unit of discourse within the filmic whole the filmmaker has stated as assertion. When the shot most clearly suggests what we ordinarily mean by 'word,' it is always an 'adverbialized,' and thus actualized, word. That is, a sentence-word.

With the elimination of the word as a constituent factor in filmic discourse, one is inevitably led to account for the latter's

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8 Ibid., 64–67.
9 Ibid., 64.
integrality of idiom in syntactical structure: it is in its \textit{sequence} of shots that a cinematic spectacle becomes intelligible and the universal translatability of its discourse conceivable. The structuring of sequence-units in film, then, allows us to draw comparisons between the shot and one of the key registers of the semic act, namely the assertive statement. When we say that cinematic language is always partial, we mean that the shot is freely chosen and freely created; and that the arrangement of shots into intelligible sequence is, in effect, an assemblage of poetic units that function as \textit{sentences}. The 'sentencing' achieved by this ordering of elements of discourse is syntactical, so that the relations created among the elements themselves and among the blocks of sequence are suprasegmental relations.

As in natural language, the oppositions produced by the ordering of syntactical elements are commutable. In this sense they resemble the morphemic oppositions in spoken language. Cinematic speech, like natural speech, actualizes the potential units presupposed in language production. Just as speaker and listener relationships require the polarization of commutable elements, the body of information signified in and through human language exchange is the objective and invariable axis toward which speech events converge. The 'dynamism' of language refers precisely to this renewal and reconstruction of human experience in speech events. The circumstances objectivized in language communication must be considered, on a level prior to their objectivization, in the light of this dynamic trajectory traced in the speech event: we are situated on this prior level as soon as we distinguish within the speech event an instance which signifies and the one signified, a shifting and multi-layered phenomenon, to be sure. What especially matters to us here is the train of equivalences suggested by our descriptions of the signifying event in language communication: the analogous relations that exist between cinematic perception and human language exchange.

A sequence of shots will by definition be arranged to present
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a syntactic whole. As was done earlier in our description of one's perception of the still-photograph, let us consider a concrete example. Take, then, a typical cinematic instance wherein the film director employs his artifice in a panning shot which sweeps along a horizontal plane before cutting abruptly to a closeup of an isolated human subject. We perceive those two camera movements as perceiving instances and as objectivization of circumstance, i.e., as the perceived. Artifice has constructed out of implausible means a most plausible and human statement; and those means—which we now see as syntactical—were certainly composed of commutable elements, the magnitude of which may or may not involve the larger problem of determining the categorical type of those units. The director has literally framed and compressed elements of discourse in language which must, however simple, however mundane, rely, as does natural language, upon paradigmatic and syntagmatic correspondences. We know that the director is free to make full use of the horizontal pan and closeup in alternating sequence to achieve particular visual and psychological effects.

Metz has spoken of the relative poverty of the paradigmatic relations that apply to a segment of film when the former are examined against the set of syntagmatic relations which, in all their assertive and singular nature, belong to the same segment. But he is forced to admit that the paradigmatic category of film is indispensable to a definition of what is, after all, called the cinematic language. Confusion as to how one should evaluate the roles of both categories stems, at least in part, to the semiotic enterprise itself, which, as we have observed (and will again), must deal, on the one side, with the materiality of cinematic language; and, on the other, with the formal character of this material expression. We would agree with Metz that the great film directors are great

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10 Ibid., 64-73.
11 Ibid., 70.
because they avoid the paradigmatic. Without even considering the complex problems introduced by a film's dialog and sound properties, we would qualify this by distinguishing a director's avoidance of certain visual conventions from the necessary correspondences between paradigmatic and syntagmatic relations (aspects of the contextual) inhering in (1) narrative structure, and (2) the sentence-like sequences whose function of designating and responding to still other sequences most clearly indicates their linguistic capacity.

It remains true, however, that the indefinite number of image subjects offered by reality, and the diversity of stylistic and dramatic approaches that may be adopted within the same film, including one made for instructional purposes, obscure the contributions made by the paradigm. The filmmaker exploits doubly, confronts doubly, in two simultaneous engagements. He engages the world itself in all its multiple stands and interstands; and he engenders new versions of the world by virtue of the image's power to charm or to assert or to clarify to someone. Though the elaboration of a genuine syntax of the cinematic event—a filmic syntax—has yet to be made, when it is, it will have had to deal with the methodological questions of (1) how one is to set about disclosing the multi-levelled structure in which the paradigmatic and syntagmatic axis is embedded; and of (2) how one is to describe the interrelations affecting this triple set constituted by the world, the film image, and the film spectator.

Those questions reconnect us to the matter of methodological determination itself—setting out a delimitable object-space for inquiry, adjusting for the partialities this will involve—and therefore to the semiotic concerns of our undertaking. One should recognize that a complete study of what we have chosen to call the language of video is no modest task. An aesthetics of the video medium as a whole would, for example, have to enumerate the physical con-

12 Ibid.
figurations of visual units in terms borrowed not only from linguistics, of course, but also from the psychology of perception and various branches of the physical sciences. Given the wealth of elements in video discourse that combine both material and conceptual aspects, it makes sense, we believe, to emphasize the importance of delineating a descriptive framework which relates the features of video production to the society in which they function.

A semiotic analysis of cultural objects always faces the problem of how one might isolate the object of investigation while maintaining reference to the greater context into which it would otherwise recede. Metz situates his study of film expression within two spheres: filmic discourse considered first as a closed text suitable to linguistic analysis, and only later as the occupant of a particularized cultural space, in assessment of which a surprising number of methodological disciplines seem to offer valid access. While conceding the necessary incompleteness of an inquiry still in search of its foundations, in the end he sustains his efforts by concentrating on film as exiguous to society: as a quasi-autonomous body of expression.

As will be seen later, we situate the essential nature of video discourse in its relation to the socio-cultural milieu from which it springs and upon which its influence has been so extensive. By so doing we affirm our conviction that sheltering the video object in closed context is valid only within very restricted (and tentative) limits; and that a semiotic description of that object is most useful when it sees the labor of 'closed-circuit analysis' in light of the processes across which society articulates the needs and objectives of its cultural institutions, of which video is one of the most recent.

4. On Video and Its Cultural Context

Whereas the motion picture film is composed of photograms

processed in the laboratory darkroom and impelled into active life by the beaming of external light, the video film is an electronic composition whose constituents are so many electronic impulses which must be decoded by electronic means. Whereas the hand of the film editor cuts and splices film, his video counterpart manipulates a bank of electronic impulses by operating a highly sophisticated electronic editing console: he is removed from their reality because he is removed from the human space-time contingencies of all pre-video media. The interval revealed to us between the original matrix and the edited result is one more instance of the static intangible, and atemporal dimension of the video process; and the parallel with data processing is obvious.

By representing a data bank in which units of information are stored for the purpose of cultivating a field of figures in visual form, the video-processing of visual information is indeed analyzable in the formal terms of information processing and digital computer technique. Most relevant in terms of our own purposes is the dual-analogy to be drawn here between the diachronic (the video film as a product to be seen) and synchronic (the video medium representing a system of signs whose atemporal, potential status allows their indefinite storage and retrieval) phenomena in human language and in cultural behavior.

The cinema is a place we go to: in a form of pilgrimage, we go to see a film, and we are captive to the room in which darkness alternates with light. We submit to the film. Video is radically other. We elect our program, and, in a special sense, it submits to us, even travels with us. That we are free to travel with a video filming and playback unit means, in effect, that we need only activate the electric current to affirm both our independence from, and commitment to, the video experience: our intimacy with it (the experience is ours and co-occurs with us) and our relationship of exteriority to it (the experience may be objectified in film play-
back, suspended, or resumed). We know, too, that the real bank’s recording of customer transactions (the documents used and the customer himself) withholds an ensemble of information in a state at once and forever latent and retrievable.

Though television is only one mode of what the present paper refers to as video, the ‘founding medium’ takes on particular importance in any assessment of video’s functional significance in society. A television program is broadcast by means of video electronics, which the viewer himself requires, at least in part, in order to receive or record the broadcast. The electronic circuitry through which sender and receiver perform, as it were, their function, can today be said to realize, to consummate, the unity of that performance: by means of the ‘interactive’ television system recently developed in the United States, the viewer is himself programmed into a community broadcast, and thus contributes his own signature, his own voice and material volume—his segment—to the flow of images. In this way, it may be remarked, he represents himself, while in the bank he is represented in the micro-data that alone state his case.

In effect, the formal distinctions that once existed between broadcast television and the video programming carried by the individual video tape no longer hold. The technical processes that apply to each of these modes fuse them into a structure in which contrasts rather than differences pertain. This is not to deny that their technological contexts are in practise very often distinct, but simply to recognize in them relational features that point to a structural identity. After all, when a teacher projects a video tape to a group of students whom he has taped performing some action, he completes the video production cycle in the way that a commercial or public television unit does.

Industrial society’s assimilation of television has been so pervasive that one cannot safely assign objective limits to a description
of the social and cultural phenomena affected or created by televisi-
onal media. It is significant that in ordinary conversation, all of
us, whatever our age or status, seem to know whereof we speak
when the subject is the world of television. By having become an
intrinsic component of contemporary culture, so remarkably a trans-
lation of its transitory character, literally our ‘air du temps,’ one
is tempted to search beyond the cadre of cultural contexts to measure
the impact of television: ultimately, to search for the meaning of
that impact in civilization itself. One need only consult the statis-
tical studies of how much time the typical American watches television
to be alarmed by the extent to which the small screen has
revolutionized interpersonal relationships.

It is not without justice, then, that one identifies television
with the throw-away society. Video has become, for better or worse,
as no other medium has, or perhaps will, the material vessel of the
spirit of our time. The stream of constantly renewed consumer
imagery, its material stimuli, though external to the viewer (or else
such stimuli would not be directed at him, at least not repeatedly),
gradually commands his involuntary respect, thereby encouraging a
certain form of irresponsibility which the television industry never
ceases to build upon. The viewer hardly cares, it is true, and yet
cares enough to perform the initial and most critical act of switch-
ing on, of sitting and partaking. Though genuinely fascinated by
the freedom to disengage himself from the process, and though
always aware that it is possible at any moment to interrupt the
term of servitude, this same freedom locks him into a dialog of
‘half-yes’ and ‘half-no’ irresponsibility.

If the viewer is surfeited by the abundance of programming
available, the latter is devalued even further by the success of its
rigorously mimetic function of presenting ‘seen reality.’ Since it
presupposes a container—washable, durable—designed to hold, not
pour, television is foreign to our concerns as persons who act. One
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is familiar with television in the way that one is familiar with one's own body and environment, but hidden within this familiarity is its almost subliminal function of pacifying an audience's instinct to engage what is seen critically, and therefore, knowingly.

The narrative and technical conventions of the cinema were adopted by the first television programmers, but then gradually transformed to meet new needs and exploit the medium's inherent strengths. People should, it was presumed, be spared the hazard of thinking about their own society. They should, finally, be deprived of history. For historical events were timed, and consequently consumed, as video units. Not historicized as in the cinema, the event was prepared for consumption before one's very eyes. The closeup shot, which counted enormously in cinema, was therefore exploited in a different manner. The video cameraman was forced to energize his restricted screen space with constantly moving and constantly re-focalized figures. In addition to the spatial latitudes imposed, the restricted light available for natural video color reproduction and resolution required him to compose his frame with a great deal of attention.14

By particularizing the detail around which the camera must route modes of gesture, expression, and especially movement, the telephoto lens has now become more than an implement: it has become a methodology,15 and just as one could make a good case for the need to construct a poetics of the telephoto lens and the spatial dynamics of the television screen, one could make an equally good case for the need to analyze television's manipulation of space in terms of the ideological significations expressed in the space-time

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compression of figures and backgrounds. Like historical events, fictional portrayals had to be reduced to the stature (physical and psychological) appropriate (1) to the dimensions of the screen, and (2) to the ideological objectives (conscious or not) of programmers. That presidential elections are so often decided by the television image projected by candidates, constitutes final proof, whether needed or not, that ideology itself, like the consumer product, is for sale.

As we have stressed, video technology and television programming represent a force in contemporary life at once factual, ideological, and material and whose impact upon private and institutional spheres is incontestable. And while we have dealt with the codifications and signifying modes of cinematic language with the aim of elucidating a semiotics of the language of video, the complexity of constructing a theoretical stylistics of the video discourse as it has evolved over the last twenty years deserves a study of its own. What we should like to do now is therefore more limited but not, perhaps, less necessary, namely to consider those features of video communication most relevant to its significance as a pedagogical resource; and further, to its significance as a resource for the teaching of language.

It is our position that if one accepts, as we do, the premise underlying the approach to language teaching adopted by the Prague School of Linguistics—that such teaching, particularly of spoken forms, should employ techniques termed 'natural' because language itself is a natural phenomenon, i.e., a universal-objective type of social behavior—the video medium has no rival, either as material support for a program or as a format in itself (in which the program is articulated). We have already discussed the significance of the former. Format is another, though internally related, matter and should be pursued further.

As a first observation, we could say that format presupposes a communications system comprising a range of applications which
material support makes possible; and that the use (and its history) made by the culture of this support presupposes a communications network consisting of a programmer, a program, a learner (or viewer), and a monitor (or supervisor). It also presupposes a certain historical evolution of the medium. So that the notion itself of a video culture presupposes the particular society’s intensive familiarity with it. The implications of all such cultural determinations for the language program writer (or writer-designer, since the writer’s work may well involve the program’s visual and sonorous construction) are vast.

While the naturalness of a spoken language is a priori impossible to determine theoretically, we do know that in industrial societies current spoken language, inasmuch as it is influenced by larger social forms (institutions, interpersonal relations, community environment) cannot be dissociated either in practise or in surface structure from media-communication as a whole. Moreover, we know that in the area of language acquisition the internal relations that exist between the mode of transmission and the form and content of the information transmitted is critical to reconstruction of the factors that contribute most to a productive interchange of teacher and learner. A description of the relations, then, that exist between a video teaching unit and the learner’s indefinite store of video knowledge—the complex of video-cultural assumptions and perceptions he brings to the classroom or studio—must take account of the fact that the video medium has instituted within industrial society an additional naturalness: a ‘second nature,’ a kind of filament, which, dispersed throughout the exterior and language worlds, affects our perceptual apprehension of both.

A child raised in contemporary industrial society understands and relates to the video presentation as a citizen of the society at large.16 Video is not a factor in his development as much as it is

the structural face of the environment that has nurtured him. In designing a language teaching program we have therefore to bear in mind the crucial differences between the video format and the other against which it stands, notably the book and the classroom support itself. The child to whom we refer entertains fewer illusions concerning the video format's reality-function than he does of his own daily life. He cannot preconceive that format according to a set of attitudes as he might, say, preconceive the form represented by a book (more precisely, a book presentation).

Are we affirming thereby that for language teaching purposes video is a more real and thus more effective communicator? Though the burden of response rests in the first instance with the program communicated, in considering the latter's intentional axis one is inevitably thrown back to the pedagogical framework, within which video programming promises a substantial but not unlimited contribution. For it is limited in two ways: by the role it would assume within the teaching system and by the fact that it cannot replace what the competent teacher does when he implements or draws upon teaching materials in a face-to-face classroom situation. In the first and last resort it is the teacher to whom the student will look for supervision, encouragement, and responsiveness no matter what program is being utilized. The teacher himself, it should be observed, is also in need of supervision and support. For it makes little sense to speak of video programming without reference to the total teaching system in which, ideally, it should be integrated. The difficulty in dealing with questions of format-effectiveness lies precisely in this multiplicity of factors which upon examination prove more and more critical as one assesses video's formative role in language teaching.

However one determines the orientation to be taken by such a program (in choosing, for example, which skill-objectives best suit a particular approach), one is necessarily drawn into the ever-shifting
dialectic that occurs whenever a language system (in which video may be one component) is employed to teach, as it were, itself, and to transmit its own inherent features. In this sense, the video medium would not, when employed in language teaching, simply convey or release information. It would, rather, constitute an essential aspect of the material conveyed.

5. Video Programming and the Teaching of Language

In this section we shall consider how and where video programming could apply to the teaching of language skills, and principally to those learners of an additional (foreign) language whose proficiency in the target-language may be said to be intermediate or intermediate-advanced. Although our comments deal with the types of video program strategy that may be devised for the supervised closed-circuit audience, many of the approaches suitable for the latter should, we think, prove equally suitable for open-circuit broadcast to the unsupervised (captive) audience. The formal and practical consequences implied in this distinction have, as we shall see, particular relevance for the type of program design incorporated into a total language teaching program. Initially, we shall address ourselves to issues of theory which have affected, and still do, the formulation of language teaching strategy.

The astonishing growth of video technology in recent years has inevitably brought with it a fresh generation of individualized language teaching programming in audio-video format for which educational institutions are hardly, as yet, in a position to judge in terms of learning potential. Prior to the mid-1960's, the vast majority of audio-visual programs designed for language teaching aimed at types of terminal behavior prescribed by behaviorist methodology and technique. In particular, the audio-lingual methodology based on the philosophy of language represented by the Bloomfield school,
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and developed most extensively in the United States, became the standard approach. Attention was focused primarily on matters of speech automaticity; and meaning, assumed to be an elusive and unpredictable property of language behavior, was conferred the status of the dispensable. It was consequently thought that by grading speech material into levels of difficulty micro-sequentially, and incorporating cues modeled in accordance with stimulus-response theory, the self-correcting procedures of this learning process would, as it were, cut through the light years of unproductive practise long-suffered under traditional, 'unscientific' methodologies.

Not surprisingly, this untenable conceptual approach did not augur well for the implementation of strategies founded upon it. When left to manage for itself in the obdurate worlds of real language, the performance of the subject 'processed' through micro-controlled channels did not attest to the efficacity of behaviorist principles employed in language training. Empirical trial and testing of the material taught and presumably learned might not be, it was suspected, the most important criterion for assessing its value. The final message was blunt: that language acquisition technique would have to reflect the real world properties to which language has always corresponded; that, in turn, the total extra-linguistic framework of real language production must in some way be called upon to furnish clues to an alternative methodology.

J. R. Firth's research on contextualized language phenomena and the research of the post-war Prague School of linguistics provided programmers with at least the appearance of a solution to the problems evidenced in inherently mis-structured behaviorist methodology. The observable gains made by refined versions of the latter could not however be ignored. It was determined, rather, that certain of the techniques it did employ (such as model-drill design) should be integrated for what they were worth into a branching teaching program which respected the view that language, far from
embodying a collection of data, comprised a group of closely related skill-activities that operate necessarily in "...some generalized context of situation." [17]

Not only language learning theory but pedagogy itself, it should be remarked, was swept by changing perspectives from within and without the educational establishment, with university and adult education absorbing their impact in advance of other levels. Educational institutions could simply not keep pace with the advances of technological progress without reorienting their own directions by deemphasizing the practice of identifying knowledge with information in favor of an approach which may, for lack of a better term, be called 'heuristic': having, in sum, recognized the urgency of responding to the learner's need for tools enabling him to meet the first requirements of professional life, educators have focused their attention on the teaching of 'problem solving methods.' Not that the latter are in principle somehow divorced from the objectives of behaviorist methodology, or had not already exercised the minds of theorists. Consider the following prescriptive passage from Cavert's *An Approach to the Design of Mediated Instruction*, a work obviously indebted to the program instruction theories of Robert Gagné:

Problem solving: The learner is expected to somehow combine two or more previously acquired principles to produce new capability that can be shown to depend on a higher order principle and can be used by the learner as a part of his repertoire of capabilities to solve problems. The design of the stimulus for the learner must display the problem situation by presenting all of the previously learned principles that are required to achieve a solution to the problem. [18]


What "higher order principle" might possibly mean is never explained in the work cited. Indeed, one wonders how it could be. Such failure to come to grips with their own foundational precepts is symptomatic of theorists whose structural concepts are based on mechanist notions of human behavior.

Inasmuch as language acquisition is at issue here, could we not, borrowing from TGG, substitute 'conscious role generalization' for Cavert's "higher order principle"? Let us look instead at remarks made by Chomsky which relate directly to this problem of establishing principles and priorities in language learning theory and process.

Linguistics is simply that part of psychology that is concerned with one specific class of steady states, the cognitive structures that are employed in speaking and understanding. The study of language learning is concerned with the acquisition of such cognitive structures, and the study of behavior is concerned with the ways in which they are put to use. It is self-defeating to construct a discipline that is concerned with use and attainment of some cognitive structure, but that excludes consideration of the structure itself. Equally misleading, I think, is the tendency in philosophical discussion to speculate on the ways in which language and its use might be taught. Language is not really taught, for the most part. Rather, it is learned, by mere exposure to the data.... Nor is there any reason to suppose that people are taught the meaning of words.... The study of how a system is learned cannot be identified with the study of how it is taught; nor can we assume that what is learned has been taught.¹⁰

Thus it is that if one agrees with Chomsky's position, one must confront the dilemma that to formulate the criteria which determine the optimal conditions for language learning is also to engage upon, or to assume, a theory of language and the structure of human cognitive capacities: an enterprise which, if not beyond the competence of most language learning theorists, would necessarily embrace several scientific disciplines.

While it is not our intention to enter into the problems of lan-

guage learning theory *per se*, we recognize the validity of Chomsky’s implied caveat, admitting thereby that those problems do impinge upon our subject to a degree at once profound and indeterminable. With this reservation in mind, we shall restrict ourselves to generalized descriptions of those principles which in the first instance concern video program construction and application, but ultimately refer to earlier remarks on the semiotics and cultural determinations of the language and medium of video itself.

Let us begin by reviewing basic approaches of the Prague School of linguistics insofar as they relate to language teaching. While genuine speech communication represents a kind of model medium for all programs designed to teach spoken language skills, programmed instruction in these skills assumes a key role in PSL methodology, of which the Prague Research Center formulates four principles:

1. The breaking down of language material into the smallest methodologically optimal units
2. Active and constant participation by the learner
3. Systematically controlled feedback to the learner
4. Pace-control of the learner’s linguistic behavior

It is recommended that practise of syntactic colloquial utterances, which constitute the audio-oral material best suited to spoken skill acquisition, be designed to optimize the possibilities for intonation drilling, expression of natural spoken utterance units, and the expression of the learner-speaker’s attitude toward stimulus statements.

Self-correcting features (e.g., strictly-paced exposure to the confirmation of correct response) should implement (2) and (3). With regard to (4), learner response-capability should be so nurtured that while automaticity become more assumed, the learner’s ability to

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discriminate among and select responses in a manner appropriate to real and spontaneous conversation must be rigorously reinforced. Programmers, for example, should be particularly vigilant in avoiding drill patterns which ignore formal conflict between the grammatical agreement of a unit and its function in genuine communication. Barnet also contends that a "stylized view of reality," in which the programmer's sentence is casually equated with a system of invariant syntactical properties, vitiates must current foreign language program instruction.

As interesting as these prerequisites for productive instructional conditions are, they do not depart appreciably from orthodox-reformist (ex-behaviorist) views, nor do they tell us much about how one might construct a methodology suitable to audio-visual programming. Essays by Camutaliova and Dubsky are more illuminating in this respect. Consider the latter's analytical classification of the objective stylistic factors which constitute meaning in the speech act, and then the factors which according to him comprise the utterance context, which we summarize as follows:

1. The function of communication: communicative (colloquial discourse); theoretical-professional (scientific discourse); mass-communicational (journalistic discourse); aesthetic (artistic discourse)
2. The purpose of speech acts: objective statement (interpretive discourse) or appeal (journalistic discourse)
3. The speaker's attitude to the discourse: serious (official discourse); humorous (the comical utterance); depreciating (ironical or abusive utterance)
4. Thematic mode: dynamic (narration) or static (descriptive)
5. Degree of spontaneity (entirely spontaneous to the entirely prepared utterance)

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Three types of speech-context correspond to (1-5):

1. Private or official

2. Bilateral or unilateral (dialog or monologue style)

3. Contact between author and addressee (colloquial utterance), either in the presence (situational utterance) or absence (discourse of broadcasting) of the latter.

Dubsky concedes that since stylistic factors appear in complex orders and styles themselves overlap, analysis of the inner differentiation of the various types of discourse is required. Without commenting on the complexity and promise of such an undertaking (the historical and transitional nature of speech-contexts would compel an inquiry of this kind to expand well beyond the frontiers of linguistic science), we do acknowledge the virtues of this schema of stylistic and contextual factors in speech communication. In the most general sense, it covers the range of discourse that an audio-video program might usefully employ. It also indicates the non-arbitrary and semiological axes to which a program-design theory should give preference: articulation in speech of emotive states, the diversity of speech registers and purposes of speech acts in inclusive or exclusive human settings, and the style of the speech vehicle (narrative or descriptive). Above all, the author defines the speech register by situating it within a condition both formal and concrete.

Camutaliova discusses certain of the linguistic aspects of creating model dialog in a way that complements the approach taken in the paper we have just considered. Outlined here is a summary of the main features of what she typifies as quality dialog, a prescriptive formulation.

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23 Ibid., 117.

1. [The dialog should] be autonomous and yet carefully integrated into overall course structure
2. correspond to a specific and real-life setting
3. feature a logical center reflecting important (sensible) life-issues or problems
4. be condensed into units which avoid superfluity
5. be dynamic, reflecting the diversity of real-life conversation and encounter (thus incorporating rules of dramatic action)
6. be suitable for training purposes, being flexible enough to allow a large variety of substitution-modification in the drill design.

Of particular interest to us is that in each of these formulations, the focus has clearly been on contextualizing dialog to a degree that would permit the learner to enter into the social discourse(s) of the target-language without neglecting the vital issue of adapting it to functional requirements.

Where it fails to be instructive is on the matter of determining which language structures provide the more favorable access to productive contextualization. Camutaliova is however acutely aware of the problem:

...it is in syntax where most problems arise. It is no easy task in any language to find the syntax generally used in spoken utterances, since such syntax lies somewhere between the standard literary syntax and the seemingly irregular, chaotic syntax of spontaneous speech.

But here again intrudes the related problem of how far verbal behavior can be contextualized. For as Sherrington points out, and as any keen observer of daily conversation may confirm, intra-verbal behavior, i.e., behavior which is unrelated to the non-personal

25 Ibid., 178-181.
26 Ibid., 180.
features of environment, constitutes a preponderant share of natural human speech. The language referents in speech events, that is, are more often than not to be found in language itself. Moreover, aural recognition of structures in speech events requires a certain mastery of syntactic classification, which—and here we confront one of the cardinal difficulties in all course-writing—presupposes a grasp of complementary semantic information (collocation variants, synonymy, antonymy, etc.).

One should insist as well that since the learner’s production of speech acts (notably in languages whose phonology, as in English, is characterized by suprasegmental features) depends on his aptitude for decoding and then encoding phonic relationships, the structural-semantic content of the teaching material’s phonic support assumes a role of premier importance. Indeed, promoting the skills of both oracy and literacy requires that the writer-designer engineer material which permits the learner to experience language inferentially. That is, by encouraging and assisting him to build upon increasingly sophisticated levels of language structure, the program itself reinforces what has been learned in the most natural manner possible. The learner’s understanding of the components that make up a language system will most certainly benefit from his active participation in the material presented. But how one assigns priorities—whether, for example, to phase exercises for the recognition of grammatical structure ahead of those intended to emphasize the production of intonation patterns—will to a large extent determine the rate of progress actually achieved.

It seems to us self-evident that structure-to-situation relationships rarely dovetail in truly satisfactory fashion. In the same connection, however, it is not difficult to see that a teaching strategy which delivers to the learner procedural techniques allowing him to make the proper language choices for himself is logical and realizable. Logical because grammar itself represents one of literate
man's most ingenious systems for assisting thought by eliminating the needless and defeating repetition (and confusion) otherwise required for its expression. Realizable because the video format furnishes us highly efficient means for articulating a visual and audio support geared to the presentation of:

1. Vertical and horizontal intricacies of syntactical and phonic structure
2. Nontrivial life-contexts (dramatic, narrative documentary)
3. Stylized or natural speech: conversation formulae or spontaneous speech forms
4. Practise models (in video and/or audio modes) which utilize techniques of micro-organization and repetition during and/or after program exposure
5. Graphic displays for stimulating symbol recognition or for explanatory purposes (e.g., the restructuring or summarizing of verbal information, showing the articulatory movements of speech production, tabulating narrative sequence, etc.)

It is legitimate to ask how one would reconcile apparently competing methods required for the practise of active skills such as speech production and those we traditionally term 'passive' or 'receptive,' such as sound recognition or reading, which are usually monitored by the learner. But interrelating the various skills seems to us the sine qua non of responsible programming. It is of course reasonable to demand that the programmer grade his material, going from the simpler to the more complex language items and situations. He must also discriminate among the various registers of language data in order to assist learners themselves first to experience, and only later, to classify the data presented, thus assuring that when those registers are practised, practise succeeds the acquired procedure techniques mentioned above.

One of the great virtues of the video medium is that it lends itself marvellously well to what Sherrington calls an 'eclectic
approach,"\textsuperscript{28} which allows the programmer to juxtapose widely varying visual and phonic elements for the learning and testing of all language skills. We should like here to provide an example which shows not only how this may be done, but also how closely syntactical, semantic, and phonic features interrelate when we are dealing with meaning and with context. Consider the following interchange in which a business executive is conversing with his department's research and development manager.

[Executive] I was pleased with the results, Mr. Gray, but can we expect future improvements?

—I was disappointed, too. We'll have to try harder next time.

It is clear that, for all practical intents, the phonetical variants that might be used in the two utterance-groups for conveying the registers of seriousness, apology, irony, hopefulness, etc. are indefinite. However, the video design could accomodate the most natural among them by framing the speech according to the register chosen. It might show, alternately, the speakers' facial expressions and, in graphic display, the corresponding shifts in tonal distribution. Retaining a sure grip on the operative grammatical and syntactical structure could be achieved without neglecting the semantic variations by having the learner imitate the speakers on the audio track (simultaneously with, or separately from, the visualized segment); and by providing oral and/or written exercises designed (1) to assist in the classification of structural features (exemplifying procedural technique method), and (2) to reinforce control of the formal and concrete 'input' of the original material (practise technique).

Admittedly, questions concerned with pacing and contextualized (visual and aural) stimuli require further elaboration. But it should be remembered that the ancillary material of any video program

\textsuperscript{28} Ibid., 39.
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series will play a crucial role in its success. The eclectic approach of which we have spoken implies much more than distributing throughout a program certain discipline 'spots'—intonational, say—of varying intensity (much as this practise may, according to circumstance, be valid). It means, for one, that written material and audio tapes be designed to integrate with the featured audio-video presentation. Material for the construction of intensive and extensive reading modules need not, of course, be confined to the script or to samples drawn from the voice-off commentary (if that mode is employed). Background texts which document the history and, more especially, operation of the firm referred to in our example would provide that complexity of detail required for reading units suitable to either type of (reading) practise.

Let us look again at the situational example discussed above. Assume for purposes of illustration that the programmer has devised a narrative structure describing the processes involved in a corporate decision to develop a new product. In this case, we deal directly with a life-context from which may be extracted for study and interpretation relatively short or long 'story' sequences (in script form, for example) that bring into play the attitudes corresponding to character role.

In sum, the possibilities made available to the programmer, and consequently to the supervisor, for guiding skill-work in all areas of language communication are impressive. Properly designed, such programming promises coherence in the most inclusive sense, interrelating physical context and linguistic form, picture and sound, for the promotion of active and receptive skills. And in instances where language structure resists visual contextualization (which become more likely as levels of complexity increase), ancillary textual resources should offer material for further practise and clarification. While ELT programming in Great Britain has been justly criticized for excessive reliance upon the demonstrability of struc-
ture,\textsuperscript{29} and while the feasibility of inserting graphic cues into the video presentation for structuring narrative (using time pauses, split-screening, freeze-framing, etc.) must in the end depend upon the competence of the writer-designer, a total teaching system should by definition be so prepared that compensation is made for limitations inherent in each of its various components\textsuperscript{50}

A strategy for that system must therefore make us of what might be called ‘\textit{structural support systems}’ which function as fail-safe elements in an architectural whole. Need it be pointed out that précis writing, whose value in teaching the art of writing (and thinking) in the target-language has never been challenged, requires strict teacher supervision? Hardly. But consider once again the example in which we treated a corporate decision to develop a new product. The steps involved in that decision, we will assume, have been narrated so that the learner’s grasp of the events constituting them is assured. The supervisor would consequently have at hand an ideal—appealing, tightly organized but still wide-ranging—battery of material for involving him in the skills of analyzing and summarizing external and intra-verbal behavior situated in a dramatic framework at once coherent and verifiable. Furthermore, the problems of teaching syntactical and semantic complexities certainly become less agonizing when we have at our disposal a program which makes no pretense of shielding learners from the complicated, ‘hesitation’ phenomena of natural speech and yet seeks by inductive and deductive methods employed in its ancillary sources to simplify the processes of understanding: simplifying them by having motivated the learner to examine the relevant data by himself; and simplifying them by having controlled the structural forms in which the utility of the data should appear, as it were, transparent.

\textsuperscript{29} Ibid., 56.

The premise underlying this elaboration of a strategic and integral overview of video programming becomes clear, namely that supervision is presupposed at all stages of program and post-program activity. On the matter of testing and validation procedures with regard to learners and programs, respectively, it becomes no less clear that supervision itself, as opposed to monitoring, is entrusted with the responsibility of judging the effectiveness of a program (and parts thereof) to modify learner behavior, retain attention, and consolidate previously acquired skills. We concede that specification, and thus the relevant testing procedure, of desired performance must enter into the criteria according to which the writer-designer constructs a program-component. Nevertheless, the enterprise of teaching an additional language has, we think, suffered from the lack of genuinely ongoing, 'in situ' assessment of that performance.

The integrated approach in whose favor we have argued from the base-point of the video medium's applicability to language teaching would be inconceivable therefore without the collaboration of responsive and highly trained writer-designers and their alter-egos, the individuals who must instruct in the 'medium of the classroom.'

6. Conclusion

Implicit in our study of the nature of the video medium and its applicability to the field of language teaching is the postulate that the meaning of language as a creative activity in social converse is indissolubly linked to perceived contexts of situation and thus to one's notion of human personality and cultural environment. The video medium, we maintained, offers the vehicle par excellence for conveying meaning in a form which, by privileging the social and physical expression of language, embodies the multiplicity of human experience. Our views on the potential value of this medium for language teaching and, in particular, for constructing an inte-
grated program design, reflected the systemic approach to descriptive linguistics advocated by J. R. Firth, a discipline which, in his words, constitutes "...a sort of hierarchy of techniques by means of which the meaning of linguistic events may be, as it were, dispersed in a spectrum of specialized statements." 31 With respect to the methodological issues raised here and throughout the preceding discussion, our treatment of the semiotic features of the language of video confirmed the importance of detailing and analyzing its structural properties from the standpoint of the sentence, whose manifestation in speech, we hold, represents the model by which future investigation into the relations between verbal and video communication should be conducted.

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