Reality Status Evaluations in Mediated Experiences

By

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Dedication

To my mother, Sun Min, and my father Qian Benfu;

I feel your love at each moment of my life. Thank everything that you give me. I try my best to be your good son.

Abstract

This paper explores the cognitive functions of the Reality Status Evaluation (RSE) system in our experiences of narrative mediated messages (NMM) (fictional, narrative, audio-visual one-way input and moving picture messages), such as fictional TV programs and films. We regard *reality* in mediated experiences as a special mental and emotional construction and a multi-dimensional concept. We argue that viewers' *reality sense* in NMM is influenced by many factors with "real – on" as the *default* value. Some of these factors function as *primary mental processes*, including the content realism factors of those messages such as Factuality (F), Social Realism (SR), Life Relevance (LR), and Perceptual Realism – involvement (PR), which would have *direct* impacts on reality evaluations. Other factors, such as Narrative Meaning (NM), Emotional Responses, and personality trait Absorption (AB), will influence the reality evaluations directly or through the mediations of these main *dimensions*.

I designed a questionnaire to study this theoretical construction. I developed items to form scales and sub-scales measuring viewers' subjective experiences of reality evaluations and these factors. Pertinent statistical techniques, such as internal consistency and factorial analysis, were employed to make revisions and improve the quality of the questionnaire.

In the formal experiment, after viewing two short films, which were selected as *high* or *low* narrative structure messages from previous experiments, participants were required to answer the questionnaire, Absorption questionnaire, and SAM (Self-Assessment Manikin, measuring immediate emotional responses). Results were analyzed using the EQS, structural equation modeling (SEM), and discussed in terms of latent relations among these subjective factors in mediated experience. The present results supported most of my theoretical hypotheses. In NMM,

three *main factors*, or *dimensions*, could be extracted in viewers' subjective reality evaluations: Social Realism (combining with Factuality), Life Relevance and Perceptual Realism. I designed two ways to assess viewers' understanding of *narrative meanings* in mediated messages, questionnaire (NM-Q) and rating (NM-R) measurement, and its significant influences on reality evaluations was supported in the final EQS models. Particularly in *high story structure* messages, the effect of Narrative Meaning (NM) can rarely be explained by only these *dimensions* of reality evaluations. Also, Empathy seems to play a more important role in RSE of *low story structure* messages. Also, I focused on two other factors that were pertinent to RSE in NMM, the personality trait Absorption, and Emotional Responses (including two dimensions: Valence and Intensity). Final model results partly supported my theoretical hypotheses about the relationships among Absorption (AB), Social Realism (SR) and Life Relevance (LR); and the immediate impact of Emotional Responses on Perceptual Realism (PR).

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List of Abbreviations

Abbreviation	Term
AB	Absorption
E	Empathy
F	Factuality
GR	General Reality
LR	Life Relevance
MA	Media Awareness
NM	Narrative Meaning
NMM	Narrative Mediated Messages
NM-Q	Narrative Meaning – Questionnaire Measurement
NM-R	Narrative Meaning – Self-report Rating
PR	Perceptual Realism
RSE	Reality Status Evaluation
SR	Social Reality

Reality Status Evaluations in Mediated Experiences

In the modern world, people are increasingly surrounded by all kinds of media: from the telephone, and books, to TV, film, and computers. More and more, human beings rely on information from a variety of media, as well as the physical world directly. We need to understand the degree to which people live in the world of media information. Media psychology is a relatively new field studying mediated environments, and the interaction between humans and media. Theorists began to notice and discuss how immensely those newly-invented media influence persons, cultures, society, and other aspects of our world. For example, a few hundred years ago, scholars might be concerned about how Gutenberg's mass printing techniques had impacted the progress of human history. In modern media studies, we ask questions about how those new electric media in *the information age*, have influenced, and are influencing today's world. McLuhan (1967) said, "Print technology created the public, and electric media created the mass." Printing made it possible that information could be communicated to most of the common people of that era, and the knowledge disseminated widely involved people into thinking, discovering and pursuing truth. The electric medium transfers messages at the speed of the light, and the explosion of information always brings human minds the information beyond their processing ability. McLuhan (1977) indicated that the electric media have huge impacts on the attitudes and behaviors of their users. Particularly, he said that, with the invention of motion-pictures at the beginning of the 20th century, new electric media brought us back to the "acoustic space" in contrast to the "visual space" of "print culture", which he called "the second revolution" ("the first revolution" is the development from oral "acoustic culture" to "print culture" in the ancient period, in McLuhan's discussion). In "acoustic space", "individuals

experienced themselves as being at the center of a spherical space, with information reaching them simultaneously from all directions…" In a sense, new media "… led the eye to function like an ear…" (McIlwraith, 1994, p.336). McLuhan emphasized that the media were not only the "extension of human sensory system", or windows, through which humans got direct access to the physical world, the media themselves created information and conventions, also provided a *new* external environment for their users. The task of media research is to investigate the importance, distribution, and effects of media on individuals and society. Previous findings show that media "rarely have a direct effect but frequently act through intermediary factors, such as persons, personal influence" (see item "Mass Communication" Vol.2, Eysenck, Arnold & Meili 1977). Media psychology studies the effect of those new media at the level of the individual.

The issue of *reality*

The issue of *reality* is one of the *core* concepts in media studies, although it is also the one that has been in hot controversy for thousands of years. In Plato's "simile of the cave" in "The Republic", he used an allegory to suggest the relationship among human minds, representations, and reality (Lee, 1974). In the "VII, 7, The Simile of The Cave, *The Republic*", Plato wrote:

> "Imagine an underground chamber like a cave, with a long entrance open to the daylight and as wide as the cave. In this chamber are men who have been prisoners there since they were children, their legs and necks being so fastened that they can only look straight ahead of them and cannot turn their heads. Some way off, behind and higher up, a fire is burning, and between the fire and the prisoners and above them runs

a road, in front of which a curtain-wall has been built, like the screen at puppet shows

between the operators and their audience, above which they show their puppets."

Given that illusions and mis-perceptions exist, the human mind may or may not reach

Plato's *ultimate reality*, which, for Plato, also included the meaning of "truth", or the "eternal,

perfect forms". I understood "the shadows on the curtain-wall of the cave" as a metaphor of

representation. In a broad sense, all messages that human minds perceive may be thought of as

representations of "ultimate reality" which we can only guess through what our senses reach.

Also, Plato argued that "the arts", the artificial, man-made representations, would be further from

the reality, because they deal with the "copies of copies" of "ultimate reality" (Neiva, 1999,

p.78). The *reality* issue is of importance for media studies because media are representations.

The *medium* concerns representations of something, even if there still exists much controversy

about what the *something* is. The word *chair* in print material is the *representation* of *something*,

whether it means *something physical*, or an abstract *form*. But, I would argue that, in the age of

electric media, the role of medium as *representations* might have already changed. The messages

from the new media, such as TV, film, or VR, have some new features different from those

traditional media in "print culture". In everyday life, the term *reality* suggests only the physical

world, but for Plato, the most important thing about *reality* was the "peerless world of

intellectual and perfect forms" (Neiva, 1999, p. 78). But, the sense of *reality* in fact goes beyond

the narrow dualism of *mind versus matter*, and *appearance versus reality*. The media in the new

age showing us images and mediated worlds not only display *reality*, represent *reality*, but also

create *reality*, and explore new frontiers of it. I would argue with some scholars that, in Plato's

simile, "the curtain-wall of the cave" should be understood as the screen of TV, film and

computer in the age of electric media (Lee, 1974; Preston, 1998).

A brief review of studies about *media reality*

Two types of studies, which are totally different, are put under the name of *media reality* studies. It is better here to make a distinction between them. The first one concerns the *social reality* status of <u>those media themselves</u>. Those inanimate media devices could be treated by users as *real* or *alive*, presumably having human characteristics such as behavior styles, personalities, emotions, social roles, etc. Like human beings in many aspects, they could involve viewers in social interaction (Reeves & Nass, 1996). For example, Nass and Reeves (1996) found in a study that viewers accepted inanimate appliances as having social roles, and they viewers contact TV set automatically as "entertainer" or "educator". It is also possible to build social interactions between a medium and its user, for example, by programming a computer to respond in a friendly, supportive way. Rubin and McHugh (1987) have discussed the "parasocial interaction relationship" between the TV and users. Another type of research concerns the *reality* status of <u>mediated messages from media</u>. It is this latter topic that I discuss in this paper.

The issue of the *perceived reality* in mediated messages from *new media* has preoccupied researchers during the last dozen years (Berger, 1996). As Potter (1988) has mentioned in his broadly-cited article, there are, in general, three main problems pertinent to the "perceived reality" of mediated messages. First, how do perceptions of media reality influence viewers' behaviors and attitudes? Second, which factors affect the degree to which individuals perceive a mediated message as real? Third, as a theoretical issue, how could "perceived reality" be defined from a conceptual and operational perspective.

Researchers have pointed out the role of "perceived reality" as an important mediator of media effects. Some scholars have investigated how immediate emotional and cognitive responses toward TV would be mediated by the "perceived reality" status of social content of

those TV materials in children viewers (Huston, et al., 1995; Wright, et al., 1994). The

cultivation hypothesis suggests that "perceived reality" is a psychological process that would

mediate the long-term influences of TV's presentation on social reality beliefs (Hawkins, 1977,

Hawkins & Pingree, 1980). For example, researchers of the cultivation hypothesis have found

evidence for a Mean World View and alienation, in studies of viewers' "perceptual reality" of

mediated experiences. However, few studies of media's *cultivation* effects have been able to

"establish 'perceived reality' as an intervening variable", but "only a contingent variable", which

means that its impact is dependent on and is mediated necessarily by other factors (contingent),

rather than having a direct, decisive influence (intervening) (Potter, 1988, p. 35).

In cultivation hypotheses about TV effects, the most significant factor influencing social

reality construction is the "TV viewing time". However, relevant theoretical and methodological

points have faced severe challenges (Shapiro & McDonald 1995). Hawkins and Pingree (1990)

criticized that the cultivation hypothesis had regressed into an *ideology*, instead of a valid

research frame, with "TV viewing time" as its only predictive measurement. There are relatively

fewer investigations of other factors, particularly those influencing immediate "perceived

reality" (Kim & Rubin, 1995). The possible list of variables could include motivation,

personality, affective response, IQ, SES, etc. (Potter, 1986, 1988).

How to construct an operational definition of *mediated reality* is undoubtedly one of the

most challenging and intriguing, sometimes most confusing, issues in this field. Some

researchers have focused mainly on the development of children's *reality* concept. In early

childhood, children face the developmental task of understanding features of images on a TV

screen as representations, instead of physically real objects (Flavell, Flavell, & Green, 1990).

But, even those children, who have already acknowledged the *representation* essence of TV

messages, still employ complicated strategies in reality evaluations consistent with their increasing experiences about the real everyday world and media. The production features of media, such as "TV-specific criteria" (Morison, Kelly, & Gardner, 1981), would be more likely to be used as the criteria for *reality* judgments by older children. With increasing maturity, viewers know that most mediated messages are fabricated, but do give us some information about "physical reality" (Shapiro & McDonald, 1995). Dorr (1983, p. 203-205) has argued that, the "probability" (representative of real life, like personal experiences or the experiences of some acquaintances), rather than the "possibility" (acceptable, suitable, something that could happen in real life), would be more likely to be employed by mature viewers, because they have more experiences about what could or could not actually happen in the physical world. The research on media reality is further complicated by the use of several different meanings for a particular term. Sometimes, people used the same term to indicate entirely different ideas. For instance, "magic window" (factuality) means "unmediated circumstances" or "without television" in some scholars' discussions (referring to Dorr, 1983; Fitch, Huston, & Wright, 1993; Hawkins, 1977), but "media accuracy" or the accurate portrayal of physical reality in others (see Potter, 1988). The debates around the operational definition of *media reality* are far from being settled. This is also a subject I want to address in my present thesis. I will discuss it later in this paper.

Departure point of present research:

My present study has two main concerns: constructing the operational meaning of *reality* in mediated environments, and exploring meaningful latent factors influencing the sense of *mediated reality*. A review of the literature of *media reality* clarified some points. First, there is far more research in this field about children than about mature viewers. Researchers seem to

assume that each mature viewer would know exactly what *real* means, and how they compare

mediated messages with the *physical reality*. This may not be the truth. From the perspective of

both academic thinking and everyday cognitive evaluations, *reality* in adult viewers remains an

intricate and controversial concept. Second, as Potter (1988) has pointed out, *perceived reality*

should not be seen as merely a function of the characteristics of the messages themselves, but

also a function of the characteristics of the viewer. Therefore, the viewers' cognitive processes

behind "perceived reality" judgments, rather than the characteristics or features of mediated

messages, must be brought back into the center of our focus. Investigations of "reality

monitoring" (Bink, Marsh, & Hicks, 1999; Carroll, et al. 1999; Johnson & Raye, 1981), the

cognitive processes about mediated messages, should be helpful for our understanding of reality

evaluations in mediated environments. Third, messages from *moving pictures* media – TV, film,

VRs, have their unique features different from other traditional media. They not only replicate

the sensory information of the physical world, but "provide information in ways that go far

beyond current representation system" (Shapiro & McDonald, 1995, p. 324). Some efforts could

be made to combine previous research on *media reality* with that of virtual reality and *presence*

in mediated environments. These ideas became the departure point of my present study.

Theoretical Construction

Narrative Mediated Messages (NMM):

All external messages perceived by us could be received as *mediated messages*, if we

extend the conception of *medium* from *media*: such as radio, TV, movies, Internet, Virtual

Reality (VR) etc., to our intra-personal sensory and perceptual organs and systems. Maybe only

those messages from *pure* internal resources can be called **unmediated**: e.g. dreams, daydreams,

imaginations, memories, etc. Typically in many communication studies (such as Lombard & Ditton, 1997), those messages which are received directly from the real everyday world through our innate sensory perceptual systems are labeled as **non-mediated**, and others from *media* as **mediated**. In this paper, we focus on only one kind of *mediated experiences* - those concerning narrative mediated messages (NMM), which indicate those fictional, narrative, and acoustic-visual one-way input messages from moving-picture electric media, including fictional TV programs (not including factual TV programs such as news, sports, talk shows, etc.) and fictional movies (not documentary films).

Reality Status Evaluation (RSE) System and *Reality Sense*:

I define *reality* as a special mental and emotional construction. It "...is not something absolute, transcendental, but something characterizing certain feelings and cognitive evaluations, which are applied to certain experienced phenomena in contrast to other ones" (Grodal, 1998, p. 25). I pay special attention to two points in this statement: First, the targets of **Reality Status Evaluation (RSE)** are "certain experienced phenomena" in human consciousness. When we experience those messages in our consciousness, whether *mediated* (TV, movies), *non-mediated* (everyday life) or *unmediated* (dreams or daydreams), it is assumed that there must exist a cognitive system of reality status evaluation - some fundamental cognitive processing - functioning equally on them. We use exactly the same cognitive and emotional operations to process each message received into our moment-by-moment, continual consciousness. Second, *reality* is something "characterizing certain feeling and cognitive evaluations". This idea of *reality* is better expressed using the term **reality sense**, in order to distinguish it from the common sense term *physical reality*. So I use the term *reality sense* to describe a subjective state,

which is not necessarily the same as *physically real*. I argue that *reality sense* is not a rigid label attached to certain messages, but a *loose* mental state or feeling based on RSE – certain mental processes, both cognitive and affective. In a sense, we could think of this *reality sense* as a mental construction in the human mind that is dynamic, instead of stationary.

Several theoretical hypotheses about the RSE system:

Jackendoff has argued that perception (mediated or non-mediated messages) and imagination (unmediated messages) partly use the same central brain circuits (cited by Grodal, 1998). To distinguish *reality* from *fantasy*, we therefore need two things: a system for a cognitive evaluation of the reality status of *mental events* by means of cues of context or internal features, and a system for mentally representing the differences between percepts and imaginations. The evaluation system as fundamental cognitive processes would keep track of the reality-status of any given mental state.

But why do we feel *real* when dreaming, and feel disoriented when being wakened suddenly? I would argue that it is probable, even usual for the RSE system, to make mistakes. In dream experiences, RSE system may misjudge because intensive subjective emotions are involved. Also, *reality sense* could be built on purpose through "suspension of our disbelief (Coleridge)", as happens in experiences of movies or VR simulations.

But how does a *lucid dream* happen, in which dreamers suddenly realize that they must be in dreams, the whole environment and all events they are encountering while dreaming are unreal? Does this mean that the RSE system is doing certain operations, such as detecting some unrealistic features of messages in dream experience? Can we also perform these same cognitive and emotional processes when mediated environments preoccupy us?

With these issues in mind, I will now discuss some theoretical points about RSE: First, RSE seems to work in some kind of *reality-on* state, which means that *real* should be the **default value** at the fundamental level of this system. From the beginning, RSE treats all messages as *real* automatically, and all messages are experienced initially as equally real by us in a *reality* status. Then, when *unreal* elements of messages are realized, the system sends signals to the higher level of cognitive processing, which might intervene in our experiences, revise current *reality-on* status, destroy *reality sense*, and further affect our cognitive processes and emotional responses to those messages. As happens in our dreaming experience, we experience our dream world in the same way as in every-day life; we just do not realize its true *reality status*. Second, I argue that RSE would not be decided by a single cognitive process, or a judgement about *absolute reality*, such as *factuality*, that only materials from the external physical world are labeled as *reality*. RSE includes complicated multiple mental processes and is influenced by diverse factors, such as messages' narrative structures, viewers' emotional responses and personality.

These two theoretical hypotheses find support from some scholars' discussions about "a bias toward belief" (Gilbert, 1991; Shapiro & McDonald, 1995). Gilbert (1991) has used a metaphor to explain this idea: Imagine a library with a few million volumes, of which only some are fiction. In his analogy, there are at least two reasonable methods by which a librarian could tag the book-spines to distinguish fiction from non-fiction. One method would be to paste a red tag on each fiction volume, and a blue one on non-fiction (Cartesian Procedure). Another method would be to tag only the fiction, and leave the non-fiction untagged (Spinozan Procedure). So, if our mind itself was "the librarian", the whole "tagging procedure" would be our *reality evaluation system*, and each "book" would be a unit of messages processed by our mind. It seems

that our mind would be highly likely to function as "Spinozan Procedure" (Gilbert, 1991), in which "the absence of a tag" was itself informative, indicating the *non-fiction* state of that book. This forms "a bias toward belief", in that our mind would accept each message as *real* automatically during comprehension, until its *fiction* features were detected. Think further that the cognitive processes with higher priority in our mind are not to check a fiction message, or detect the *unreal* elements, but to comprehend them all in certain sequences during mediated experiences. It is like a librarian whose duty is to read all books. If he has surplus time and energy, his extra task is to tag them, and detect *fiction* volumes. Especially for those media such as film or TV, the quick pace of the montage pushes viewers forward to process mediated messages, and the viewers have to understand each piece of information in a limited time in order to enjoy the media. Again, I can use an analogy of a librarian to explain this. This librarian must read 100 volumes in an hour, and his urgent duty would be to process the incoming messages, then still try to detect cues for fiction. You would be very likely to *forget*, or just have no time and energy for the less important duty of tagging fiction books. Gilbert (1991, p. 108) has said that "comprehending and accepting were, in fact, the same operation." When your mind comprehends messages in consciousness, accepting them as *real* is the *default* operation, then mental processes start to work for *reality status*. I think that this theory explains the latent psychological function that makes our minds more susceptible for maintaining *reality sense* in mediated experiences.

Reality Sense **in Narrative Mediated Messages (NMM):**

For a long time, scholars have recognized the resemblance of some types of mediated experiences (viewing fictional films and TV programs) to dream experiences. The main point

behind this phenomenon is the sense of *reality*, which functions in all our experiences. The *reality sense* here, as I have argued, is the mental basis of consciousness for most of our experiences, and should be paid special attention. The concept *reality sense*, which could be indicated more properly as one kind of *mental reality*, should be distinguished from common-sense *real-factual* (something happening in real time and space) but connected to the concept *presence* ("the illusion of non-mediation", Lombard & Ditton, 1997).

Reality in NMM is not a uni-dimensional concept, such as "factuality" (Hawkins, 1977; Potter, 1986, 1988). Media, such as TV and movies, are depicted as "magic windows" through which people reach the real world outside the medium world. If the concept *factuality* is taken for granted, the only criterion to judge the *reality status* of mediated messages should be: "Do these persons and events in mediums really exist or happen in real time and space?" (Fitch, Huston, & Wright, 1993, p. 42). All NMM should be just labeled as *unreal* or *fantasy* because all persons in them are actors, all events are scripted and rehearsed. But, there is evidence that the programs with actors and scripts are still felt as *real* (Dorr, 1983; Fitch, Huston, & Wright, 1993).

Young children may mis-regard TV as a "magic window" because they can't yet understand fully the essence of this medium (Davies, 1997). They either see the images on the screen as *factual* objects, or fail to check the distinction between *appearance* and *reality* of media representations. With the increase of age and cognitive ability, children begin to learn that those flashing images on the screen are not factual, and understand the features of media representations and the conventions of all kinds of electrical media. Undoubtedly, all normal adults can identify correctly the *factuality* status of NMM. However, I would argue that

identifying *factuality* of TV programs is only one aspect of how the RSE system functions, and our *reality sense* still relies on other mental processes.

Allen's film theory (1997) of *projecting illusion* sheds some light on this issue. When we view a fictional film, we experience a representation as if it were a fully realized world of experiences and not only a representation. We do not necessarily think that the represented objects are actually before us in the space of the real world, not physically real, yet we visualize and fully realize those objects before us, as unmediated by representations. (In other traditional art forms such as literature, or painting, most of the information that is realized in human minds is represented by symbols, such as language characters and two-dimensional still images). Allen treated this "projecting illusion" as the mental basis for film viewing experiences, different from the appreciation of other art forms. In other words, the "projecting illusion" of NMM means to suspend intentionally our cognitive processes about *factuality* judgments. Comparing black and white, vague-image documentary newsreels with vivid sci-fi movies or virtual environments, we have the ability to identify easily the *factual* elements in the former one, but we still "suspend our disbelief" of the latter's *factuality*, to enjoy them as an alternative *mental reality*. Thus, not *factuality* but other judgements are more crucial for our *reality sense* of NMM.

The sense of *reality* is also related to the concept of *presence*. Some researchers (Mantovani & Riva, 1999) in this field suggested rejecting the commonsense "ingenuous realism-dualism", which only connects *reality* to the physical, external entity, and contrasted external reality to internal ideas. They argued that, even if the whole human experience of existing in an environment is bio-culturally mediated, some pure mental productions, such as mediated experiences, would still be in the scope of *reality sense*. Lombard & Ditton (1997) described *presence* as "the perceptual illusion of non-mediation" when viewers experienced

mediated environments, both in high-tech simulations, virtual reality and traditional media, such as TV and films. This experience "… seems truly 'natural', 'immediate', 'direct' and 'real', a mediated experience that seems very much like it is not mediated" (Lombard & Ditton, 1997, p. 1). We can find that, to some extent, the concept of *presence* is analogous to "the projecting illusion", which indicates the "fully realized" experiences, unmediated by representations. But, it should be emphasized that the "presence" is not equal to the *reality sense* in NMM, even though *presence* works as an important mental process to enhance *reality sense*. The concept *presence* as "the illusion of non-mediation" emphasizes the technological aspect of subjective experience, that is the illusion of "not being mediated by the medium technologies". I would define the *reality sense* in NMM as the "subjective sense of non-representations in mediated experiences", or the mental state characterized by the "projecting illusion of a full-realizing mediated world". Electric media, particularly film and TV, create a new way in which the human mind comprehends mediated messages, and absorbs information in the illusion of non-representation, which I term *reality sense*. Now, I will move on to discuss in detail those mental processes influencing the *reality sense* in NMM.

RSE System As Mental Processes in NMM:

Realism elements in RSE:

Programs that are non-factual may still be judged by the RSE system as real if they show people and events that appear similar to what might happen in real life or useful to the viewer's own life (Fitch, Huston & Wright, 1993, p. 43). In Fitch et al's discussion of "television reality", two dimensions of reality in NMM are distinguished as **factuality** and **social realism**. This parallels other researchers' theories about perceived television reality (Flavell, Flavell, & Green,

1990; Hawkins, 1977; Potter, 1986, 1988). Potter (1986, 1988) argued that three dimensions of "reality" could be constructed in TV messages: "magic window" (close to *factuality*), "identity" (similar to *social realism*), and "utility" ("being an instructional aid that augments and expands direct experiences", Potter, 1988, p. 26). As Morrison et al. (1981) asked in his research, "as a representation, is this real?" **Factuality** means: Are the people and events shown *real* outside the media world (Fitch, Huston, & Wright, 1993)? Or are mediated messages an unaltered, accurate representation of actual life? ("magic window", Potter, 1986, 1988). This concept indicates a *direct* relationship between media representations and their *referents*. The premise of the concept *factuality* is the existence of *something* in the physical world, then we ask to what extent the mediated messages represent them. Thus, the telephone should be a typical *factual* medium; and news, documentary films should be the examples of *factual* mediated messages.

Shapiro and McDonald (1995) have discussed two general types of reality that seem to emerge. First, there is the notion of "physical reality" (factuality). "Physically real" means something verifiable by first-hand observers through physical time and space. Second, another type of *reality* indicates how much information those representations and concepts provide us about "physical reality". Dorr (1983) has found that viewers would define *real* as something that was fabricated, but still gave us some information about *reality*. When we talk about **social realism**, we ask: Are the people, places and events in media similar to those in the real life ("identity", Potter, 1986, 1988; "social expectation", Hawkins, 1977), or do those mediated messages reflect *truth* about the real world? Here, it is irrelevant and unnecessary to require the *actual being* behind the media make-up. A drama about warfare and a comedy about American suburban life could have equal *realism* because, although all those mediated messages in them are staged, they are *possible*, *believable*, or *probable* in the physical world.

Some researchers have suggested that young children, or naïve viewers might treat images on the screen as *real* instead of representations (Flavell, Flavell, & Green, 1990; Preston, 1998). For example, young children would say that the water in the cup on the screen would splash out if the TV set was turned upside down. Or, during the Lumiere brothers (1895) first public screening of an approaching train, viewers felt panic and began to flee, indicating the gradual development of visual literacy. For mature viewers, I argue that, both the concepts of *factuality* and *social realism* are concerned with the messages on the screens as representation. The difference between them is that *factuality* means the direct connection between mediated representations and referents in the physical world, but *social realism* does not. News, sports programs, documentary films are the examples of *factuality* of mediated messages. For NMM as representations, there is no *factuality*, but *social realism*. I would argue that, all actors, all made-up scenes, all rehearsals in the mediated world are just procedures to produce representations, which may contain a lot of information about the physical world, but not signify any direct *referents* in it. In a sense, these procedures of moving-picture making are the same things from the general perspective of *media* as printing workers' printing words on pages. Both of them produce presented messages, representations, for audiences. Those children who have mastered the essence of *media representations*, can distinguish *reality/appearance* differences, and would no longer make such mistake as "the water splashing out if TV set upside down". But, they may still not understand the *non-factuality* of NMM, because NMMs have no direct referents in the physical world. These children may mistreat those rehearsals and acting as the *physical reality*. Obviously, mature adult spectators can comprehend the essence of *fiction* about NMMs accurately. Also, they understand the concept of *factuality* in the *general* mediated messages, and they know that some TV or film programs are documentary, whose events actually happened and

have *direct referents* in the physical world, while others are not. Although most research about

the *reality dimensions* in mediated messages has recognized *factuality* as a fundamental concept,

this theoretical ground should not apply to mature spectators viewing fictional messages. I argue

that mature viewers would suspend the judgements about factuality status of NMMs (suspension

of disbelief, Coleridge), and *factuality* would just not distinguish itself as an independent factor

any more.

In addition, we would notice that the information about *reality* might include meanings

different from *similarity* to the physical world. Following Potter's (1988) discussion about

"utility" or "instruction", we may ask: Can I learn something from the people, events or

information shown that will be useful? ("utility" or "instruction", Potter, 1986, 1988) I would

like to coin another element of realism – **life relevance**: are these mediated messages useful, or

relevant to the spectator her/himself?

Lombard and Ditton (1997) further distinguished another dimension in mediated

experiences: **perceptual realism**. A media portrayal is plausible or *true to life* in that it reflects

events that did (factuality) or could (social realism) occur in the physical world. There is a

philosophical basis, *ingenuous realism-dualism* (Mantovani & Riva, 1999), behind these ideas,

in which every theoretical proposition is built on an ontological assumption – the absolute, pure

physical reality external to the human mind. But it is also possible for mediated messages to

include a perceptual element that is separate from the *external physical reality* outside of the

media and the human mind. For example, a science fiction film may be low in social realism but

high in perceptual realism. Although the events portrayed are unlikely, the objects and people in

the film look and sound like what one would expect if they would exist (e.g. dinosaurs in

"Jurassic Park"). When we talk about *perceptual realism*, we indicate the *presence* experiences

about "the perceptual illusion of non-mediation" (Lombard & Ditton, 1997). So, we fully involve or immerse ourselves into those mediated experiences, and simply ignore the question about what the essence (as *representations*) and substance (as *mediated*) of those messages are, and what their relations with the *external physical world* are.

Some researchers (Baird, 1998; Johnson, 1987) have argued that the element of *perceptual realism* has its influence in the RSE system through the functions of *image schemata*. Image schemata play an important role in our experiences of the NMM discussed here (fictional, narrative, A&V one-way input and moving-images). Image schemata and their transformations are special image-based cognitive structures, but different from both particular mental images and abstract propositional representations. However, they are the cognitive structures for organizing our experience, comprehension, and imagination, through which we construct any comprehensible structures in our everyday life experiences. The transformations of image schemata are *natural* recurring operations in visual experiences so that they are cognitively real. All visual messages entering the flow of consciousness, no matter from mediated circumstance or real every-day life, are operated cognitively using image schemata in the same manner. Because all messages are evaluated on the basis of the same set of image schemata and their transformations, some perceptual features of those messages from TV or films accord with those in real life, which would possibly make the RSE system fail to detect or warn of their *unreal* status. Baird (1998) has offered an example of how the functions of *image schemata* increase viewers' perception of *reality*: When computer technicians simulated the movements of a huge dinosaur in the screen, they shot extensive footage of real huge animals, such as elephants, then modeled their movements in partial details. We have never seen dinosaurs walking in real life, but our *image schemata* about huge moving animals provide clues for our visual processes to

enhance the *perceptual realism*. So, mediated messages can be perceived as *real* not only because they represent directly (factual) or are compared automatically with (socially real) the *physical world*, or are relevant to viewer's own life, but because they are *perceptually real*.

RSE as *primary mental processes*:

Here, I would emphasize again that reality evaluations were NOT judgements according to an absolute criterion of *factuality*. RSE means all the cognitive-affective mental processes during mediated experiences with *real-on* as its *default*. Thus, I argue that all these realism elements mentioned above: Factuality, Social Realism, Life Relevance, and Perceptual Realism, function in the RSE system as the *primary mental processes*. The viewer in a mediated experience makes the same cognitive evaluations about the Factuality, Social Realism, Life Relevance, and Perceptual Realism of messages entering his/her consciousness as in other experiences, either unmediated or non-mediated. The viewer experiences all messages in his/her consciousness on the basis of the same cognitive-affective functions, such as the *image schemata*. There are *primary mental processes* based on those four fundamental *realism elements* I discussed before. Therefore, reality evaluation is not a single cognitive judgement about mediated messages on a bipolar standard: *reality – fantasy*, or *real on – off*. I would argue that, as long as those *primary mental processes* go on, the *reality sense* is maintained in all experiences and may be only different in its degree and extent in various situations and conscious states.

Especially in fictional NMM, these *primary mental processes* (e.g. the RSEs of Factuality, Social Realism, Life Relevant, and Perceptual Realism) could be impacted by other high-level cognitive and affective processes. For instance, *empathy* may be one of these high-

level, and complicated processes having influences on them. Some scholars have recognized the role of *empathy* or *identification* in mediated experiences (Zillmann, 1991). However, this is a very intricate issue. Although it is common that *empathy / identification* happens in narrative mediated experiences, it is also a varied, and multi-level phenomenon. For example, the traditional aesthetics would not be the same about *empathy* in different art formats. To empathize with the main character would be thought as the key experience when viewing a tragedy. On the contrary, in order to enjoy a comedy, the spectator would be anticipated to identify with the POV (point of view) of *an omnipotent observer*, instead of the character, maintaining a superior position to look down on, and laugh at the character's behaviors. Also, there exists the distinction between identifying with the POVs of characters and of authors. In summary, narrative mediated messages immerse viewers in simulated environments through their own particular aesthetic characteristics, such as different "empathy" patterns, as well as their formal properties, such as technical features (Barbatsis, 1999). I argue that, all these mental operations would be mediated by these four *primary cognitive-affective mental processes*.

Narrative structure:

On the other side, it has been argued that "realism does not require real-world content, but refers to the connectedness and continuity of the stimuli being experienced" (Witmer & Singer, 1998, p. 230). One of the important features of NMM is their narrative structure, which is also the basic structure of *mental reality*. So, in NMM, narrative structure should also be an important element to increase the *reality sense* of mediated experiences in addition to realism elements. For example, production factors of TV or films play an important role in the perceived *reality status* of NMM. Those formal features, such as editing of TV or films, which work as

their syntax, accord with basic human cognitive processing (Fitch, Huston, & Wright, 1993, p. 39-41), and thus serve to make *the illusion of reality*. For example, the functions of POV (point of view) shots and action / reaction editing in film techniques have been considered due to their consistency with human cognitive processes. Of course, some other formal features of mediated messages may reduce viewers' reality perception. More importantly, these techniques link all pieces of mediated messages into a narrative *continuum*, which weaves all aspects of mental processes: perceptions, memories, imaginations and emotions into the *flow* of human consciousness. I believe that *narrative structure* is extremely crucial for the reality evaluations in NMM.

Why can fictional NMM sometimes be perceived by us to be more real than even some messages obviously based on the physical world, such as news? I argue that *narrative structure* could be one of the major answers. Narrative structure specifies some basic relations between perceptions, memories, imaginations and emotions, and is consistent with fundamental ways in which we experience the world. "Human beings think, perceive, imagine, and make choices according to narrative structures," which are essential for human communication (Lang, Sias, Chantrill, & Burek, 1995, p. 103). Narrative structure is a framework within which these mental operations about *reality sense* interact in our consciousness. Grodal (1998) argued "for this reason, ... (fiction) film is part of reality, its experienced power connects to the way in which it cues experience of central processes in the mind-body-world interaction." Thus, we think that narrative structure should be also the mental construction in which the RSE system functions. Because we experience the full *reality sense* in narrative structures, some messages in films or dreams with more *reasonable* narrative structures are likely to be perceived by our consciousness as more *real* or vivid than others, sometimes even like the experience of every-day life itself.

Artists, philosophers and psychologists have given different answers to the question: what is *narrative structure*? I argue that *narrative structure* does not only mean the *story structure* in NMM, but connects to the fundamental mental processes of viewers. In Bordwell's theory (1985, 1989, 1991) about film narration, *story structure* only means the *template* of narrative structure, or the *canonical story format*, (Bordwell, 1985, p. 35) which is "something like this: introduction of setting and characters – explanation of a state of affairs – complicating action – ensuing events – outcome – ending." Every individual, including children, processes input information on the basis of these *story templates*. For example, previous experiments (Meadowcroft, 1989) suggested that, during the viewing of mediated experiences, if some messages were missing, or violated story templates, people may add or distort information automatically to go along with them, which is the typical cognitive process called *accommodation*. Also, Bordwell argued that, the film's *synzhet* (plot sequences) and *style* (formal features) interact with spectators' cognitive processes, cue them to do certain cognitive operations (such as inference-making, evaluation), and finally channel them to construct the *fabula*, the deep structure of narrative meaning. The *synzhet* is the certain connection and combination of all those people and events presented in a film by specific **plot** sequences, and the *fabula* itself is the deep cognitive construction about the **story**, the time-space-causation relations among mediated information (Bordwell, 1985, p. 53).

Furthermore, Bordwell agreed that "*goal orientation* is the salient aspect of the schemata of causality." (Bordwell, 1985, p. 35) To understand the narrative meanings of NMM is to understand the *goals* or *intentions* of characters or filmmakers. Brunner (1986, p. 16) said that: "narrative deals with the 'vicissitudes of human intentions'." To a viewer, *narrative* suggests that he / she can make meanings out of those messages. Viewers can empathize with the characters in

narrative programs, perceive them as psychically intended individuals, and identify with them from various psychological aspects. From another perspective, he / she can understand that the medium material was made by someone else for the purpose of communication, and he / she can understand these human intentions behind these mediated messages. Briefly, *intentionality*, which produces the meanings for the inanimate messages through the intentions of human minds, is essential for the *narrative structure*, no matter whether it involves the intentions of the makers of medium-material or characters in programs.

Other Factors influencing RSE

Emotional Responses in RSE:

Emotional responses are constructed into narrative structures of NMM to reinforce our *reality sense* about them (Miall, 1989). It has been argued that affect is primarily a top-down process, directing low-level cognitive processes. Emotional and cognitive processes interact to shape our experience, and are usually hard to distinguish from each other (Perse, 1990). Contemporary psychologists are more willing to focus on hot cognition, which is affected thoroughly by affective processes, such as *preference* (Zajonc, 1980). Objects or their representations need to be cognized very little, even minimally, to arouse preferences to them. These preferences, immediate emotional responses, may be gross and vague, but can influence the ensuing cognitive processes to a significant degree. Many psychologists would suggest that cognition and affect are two sides of a coin in the moment-to-moment mental process, and might act by continuing, adjusting and redirecting initial processing (Preston, 1998; Zillmann, 1991)

Emotional factors may influence our RSE of NMM through two hypothetical processes: First, *reality* is constructed in our consciousness as narrative structures, which combine both cognitive elements and affective elements. So, mediated experiences containing *plausible* emotional arousal that match what is happening in the story would be felt more real than those without. For example, the mediated messages showed the viewer a situation and at the same time, the TV or film programs arouse in the viewer affective responses fitting for that situation. We said that the viewer was experiencing a mediated world with abundant *plausible* emotions, which would undoubtedly enhance her / his involvement into the mediated experiences. Cohen (1999) has discussed that, because of its significant emotion-arousing feature, film music is a regular technique which was employed to activate our affective association, and to heighten our sense of the diegetic film world as real. Because affective associations always accompany all processes from perception, imagination to memories in our consciousness of unmediated or non-mediated experiences, it should not be a surprise that those mediated messages with affective clues would be felt as more *real* than those without. Second, emotional processes themselves can interact with and alter our cognitive processes directly. High emotional arousal may involve a bigger portion of our finite mental energy for information processing, thus reducing the threshold value of RSE. When we are emotionally involved in those mediated messages, the more mental energy is spent in emotional arousal, the less will be distributed to cognitive processing (Kawahara, et al., 1996; Lang, Dhillon, & Dong, 1995). So we just simply do not have not enough time or mental energy to detect the *reality status* of those experienced messages, so we go with the default of "reality on". For example, when we view a breathtaking action movie, we feel it is exciting and *real*, especially during or immediately after the viewing.

Personality Trait Absorption:

Individual differences should have their influence on mediated experiences (Finn, 1997). Researchers (Roche & McConkey, 1990) indicated that the personality factor *openness to experience* is a common core of events such as imagination, daydreaming, artistic sensitivity, awareness and appreciation of emotional responses. One of its facets, absorption, is found to be systematically related to cognitive and emotional processes (Roche & McConkey, 1990), functioning as a highly salient and stable personality trait in media study (Preston, 1998).

An important characteristic of absorption is its strong relation to imagination and fantasy. It has been described as "a disposition to enter under conducive circumstances psychological states that are characterized by marked restructuring of the phenomenal self and world" (Wild, Kuiken, & Schopflocher, 1995, p. 570). On one side, absorption is related to a heightened sense of the reality of the attentional objects, the imperviousness to normally distracting events (Tellegen & Atkinson, 1974). An individual who is high on personality trait absorption is usually more likely to be involved with the object or event he focuses on, and treat it as real. On the other side, absorption means an appraisal of information in unconventional and idiosyncratic ways, and a readiness for deep imaginative involvement. A person high on absorption always creates vivid and colorful meanings from mediated messages, which is crucial for his/her mediated experiences. In summary, absorption as a trait means the receptiveness and openness to experiences that involves a suspension of reality testing and a narrowing or expanding of consciousness (Hilgard, 1979).

Low-absorbers tend to adopt an instrumental mode of functioning and goal-regulated behaviors (Roche & McConkey, 1990). So, we argue that they may attend to the instrumental aspects of the external environment, which should interfere with their RSE of fictional NMM.

Furthermore, low-absorbers may be more likely to resist Factuality and Life Relevance (utility) criteria for *mediated reality,* because those messages relevant to the external physical world and their own life seem to be more important for them. So, if those messages are thought of as *faked* (impossible in physically real life) or not instrumentally useful to their own life (less utility), low absorbers may have no interest in them, refuse to involve themselves into, and not be able to experience them as *real*. In contrast, high-absorbers tend to adopt experience for its own sake and to fully elaborate its meaning outside the context of the instrumental physical world. In summary, absorption should be taken as the RSE-enhanced personality trait in fictional mediated experiences.

Purposes of the present research:

After reviewing research about the mediated experiences in media study, I identified a few questions about *reality sense*. First, most studies on this topic treated all *mediated messages* as homogeneous, and researchers investigated *general* TV messages, or the mediated world. But, I think that there are at least two kinds of mediated messages, factually-based messages and fictional mediated messages, behind which the human mental processes are totally different. So, I focus on just one kind of mediated messages: Narrative Mediated Messages (NMM), which are organized in narrative structures, and are basically fictional. I think that different degrees of *narrative structure* in mediated messages would make significant differences in viewers' reality evaluations. Second, much previous research studied only children viewers. But, I believe that reality evaluations are still the fundamental mental processes in mature adult spectators, and their *reality sense* should contain the same separate dimensions as children viewers. In summary, I designed my present study in these two aspects to distinguish from previous research.

In the present research, I studied the intricate relations behind the Reality Status Evaluations (RSE) system. Following from previous studies, I show that there are several dimensions functioning in the *reality sense* in mediated experiences. Also, *other factors* will work to increase viewers' *reality sense* through these dimensions. But, which dimensions are important to reality evaluations, and which factors are working through other mental processes, are difficult questions to answer. In the present research, I will attempt to study these complex relations among these dimensions and factors in mediated experience, such as General Reality (GR), Social Realism (SR), Factuality (F), Life Relevance (LR), Perceptual Realism (PR), Narrative Meaning (NM), Empathy (E), personality Absorption (AB) and Emotional Responses (Valence and Intensity).

I did the present study in three steps:

Step 1: Pre-testing: video clips selection: I wished to select suitable video clips as NMMs – narrative mediated messages for this study;

Step 2: Questionnaire development: I designed questionnaire items to measure the subjective factors relative to the present study;

Step 3: Main study: I did the formal experiment about the reality status evaluations in narrative mediated experiences with the video materials and questionnaire in Step 1 & 2.

Part 1. Pre-testing: Video Clip Selection

On the basis of the concept of *narrative structure*, researchers selected video clips with different degrees of *story structure*. After participants (N = 18) viewed several video clips, researchers asked them to report their understanding of the narrative meanings, and to indicate their reality evaluations of these video materials. Eighteen third-year university students (their gender was not reported) participated in this procedure. Video materials were 8 short films, about 5 – 6 minutes each, including 2 point-of-view (POV) films (*airplane* and *ice-car racing*), and 6 short films from a collection of experimental films (*Unique Perspectives*, made by National Film Board of Canada, 1987), which were used in their entirety except that titles were deleted.

Our criteria for selecting video materials for main study included: a) the story structure - whether or not there is a clear story being told in the given film messages; and, b) the variance of measurement - avoiding video materials that are rated extremely in questionnaire items. For those video clips with extreme scores on item answers, the range of reality evaluations would be restricted. For example, when most of the viewers rate a video clip as obviously realistic, the resulting restricted variance for the *reality* measurements (e.g., all scores are close to 1) would bias statistical analysis. Table 1.1 shows the means and standard deviations of self-report scores for all video clips.

According to their ratings, two short film clips (*Angel* and *Pandora*) were selected, with *high* versus *low story structure* respectively. *Angel* has a high degree of *story structure*, telling a clear story. *Pandora* is a short symbolic film with a loose story structure, full of surrealistic images, which permit participants to freely imagine possible meanings.

These two short films are from Unique Perspectives (Canadian National Film Board, 1987, 58 min. 23 sec). There are nine short films in this collection, which are the products of unique views of people and life. The two short films used finally in this study are: *Pandora*: A surrealistic retelling of the old myth in the form of a dream fantasy with no real parallel to Pandora, replete with striking symbols where everything is larger than life (5 min. 29 sec.); *Angel*: A girl, a young man and a dog try to fly with wings more symbolic than practical (6 min. 54 sec.). (*Title Code: 111C 0183 100 MSN: 18314, quoted from NFB website)

Part 2. Questionnaire Development: *Reality of Mediated Experience*

Because *reality* in mediated experience is connected to multiple subjective processes, the questionnaire would be one of the most suitable methods for this study. So in Part 2, I intended to develop some questionnaire items to form several brief scales to assess the processes involved in perceived reality.

Item Construction:

The content validity of these scales will derive from theoretical constructions behind them. Some items we were using came from relevant scales in other studies (Lombard & Ditton, 1998; Witmer & Singer, 1998), and we made some revisions to fit our current conceptual definitions. In the present research, we measured the following subjective factors in mediated experiences: multi-dimensional reality sense, empathy, narrative meaning, and media awareness.

Multi-dimensional Reality:

As I have discussed above, many researchers agreed that *reality* in mediated experiences is a multi-dimensional concept (Hawkins, 1977; Morrison, Kelly & Gardner, 1981; Potter, 1988). Meanwhile, there exists a lot of divergence about which dimensions this concept includes. For instance, some people consider *reality* in TV as "factuality" and "social realism" (Flavell, Flavell, & Green, 1990; Fitch, Huston, & Wright, 1993), and Potter (1988) argued that it would be better to understand "perceived reality" in TV as three dimensions: "magic window", "instruction", and "identity". In the present research, I try to address this controversy, and develop a questionnaire to measure the dimensions in the *reality sense*.

General Reality (GR):

If we want to know participants' subjective sense of *reality* in mediated experiences, as some researchers have pointed out (Morison, Kelly, & Gardner, 1981), we can just ask them: *Is that real?* or similar questions, regardless of concrete reasons behind, *why is that real?* In this study, we used similar *general* items as a direct indicator of the *reality sense*.

Factuality (F):

This dimension of *mediated reality* in our research has the same meaning as: "factuality"(Fitch, Huston, & Wright, 1993), "magic window" (Potter, 1988), or "actuality" (Morison, Kelly, & Gardner, 1981) in previous research. Factuality implies that the events and people that actually happen in the physical world would be connected *exactly* to those mediated messages as representations. But, because of the obvious *fictional* states of narrative mediated messages, this concept shouldn't appear as an independent dimension in NMM any more for adult viewers.

Social Realism (SR):

This dimension means the same as "social realism" used by other researchers (Fitch, Huston, & Wright, 1993). As Dorr (1983) has expressed in her study, we can ask: "As being fabricated, are these mediated messages real?" As representations in media, NMM have no direct *referents* in the physical world, but they do tell us some information about it. Here, "possibility" and "plausibility" instead of "actuality" of messages are the focus of consideration. The degree of similarity of the mediated messages to the *actual* world will be the concern behind the judgements of Factuality.

Life Relevance (LR):

This dimension is close to the "instruction" and "identity" factors in Potter's (1988) theory. Some participants may rate the film as *real* according to the perceived *relevance* and *utility* of those messages to their own life. (e.g. a documentary film about Africa may be perceived as low in *reality* by a Canadian, simply because of the remoteness and *mental distance* of the program to his / her everyday life.)

<u>Perceptual Realism (PR):</u>

Some researchers (Lombard & Ditton, 1998; Witmer & Singer, 1998) have developed questionnaires to measure the concept of "presence" in mediated experience. When viewers suspend actively their disbelief about the *physical reality* in NMM, they involve themselves into the mediated world, and perceive those NMM as fully realized before them, no longer as *mediated* messages ("the illusion of non-mediation", Lombard & Ditton, 1997). This subjective experience itself would be a strong reason for participants to say: "this is so real!" and definitely is a major factor in mental processes influencing viewers' *reality sense*.

Empathy (E):

This factor has been found to be significant in mediated experiences. As some researchers have argued (Zillmann, 1991), if viewers could closely identify with the character on the screen, their experiences of mediated messages would be reorganized entirely in a new way. In the present research, we explore the impact of empathy on *reality sense* of NMM. We developed a few items to ask viewers' experiences of empathizing with characters during film viewing.

Narrative Meaning (NM):

We asked viewers to report the extent to which they understood the meanings of the narrative messages on the screens. These meanings may include the *story* from these mediated messages, the mental perspectives of the characters in the story and the purposes of filmmakers. Because we used only narrative fictional video materials in present research, we assumed that these questions about *intentionality* would indicate the extent of understanding narrative meanings. We designed some items to measure the degree of viewers' comprehension of these narrative messages.

Media Awareness (MA):

A few extra items were added into the questionnaire to detect the manner in which participants pay attention to mediated messages. We borrowed a concept – media awareness from Biocca and Kim's (1997) research to investigate whether concrete content of mediated messages, or just the technical features of media themselves attracts viewers' attention. Many scholars of presence considered that "media awareness" has a significant relationship with "involvement" and "immersion" in "presence" experiences (Lombard & Ditton, 1997; Witmer & Singer, 1998).

Pilot Questionnaire:

Referring to relevant questionnaire items from previous studies, I developed 3 – 5 items for each factor. All items were answered on 7-point Likert bipolar scales, and were arranged in a random sequence to form a questionnaire for pilot tests.

The original version of the questionnaire which I administered in a pilot experiment is listed as followed. As this is only the first draft, all errors and omissions would be corrected eventually during questionnaire development. The codes in brackets indicate the items' positions in the questionnaire in the actual pilot testing.

Multi-dimensional Reality Evaluations:

General Reality (GR):

1. (11GR) The experience caused real feelings and emotions for me. (Not at all / Always)

2. (13GR) To what extent did you experience a sensation of reality? (Never / Always)

3. (15GR) It is likely that the events I saw/heard in the video would occur in the real world. (Not at all / Yes for sure).

4. (25GR) How real did the content you saw/heard in this clip seem to you? (Not at all / Very much)

5. (30GR) How often did you feel that the media environment you saw/hear became reality for you? (Never / Always)

Factuality (F):

1. (5F) The events I saw/heard could actually occur in the real world. (Never / Always)

2. (14F) The scenes displayed situations and persons that exist in space and time of an imaginary world. (Pure fantasy / Not at all)

3. (16F) I think that the events narrated in this medium dramatize events that would happen in real time and space. (Never / Always)

Social Realism (SR):

1. (2SR) This video experience helped me to know more about what happens in real life. (Not at all / Very much)

2. (6SR) Regardless of other aspects, the features of persons and events in this clip are authentic and believable. (Not at all / Totally)

3. (12SR) The way of the events occurring in this clip is analogous to the way they occur in the real world. (Not at all / Very much)

Life Relevance (LR):

1. (18LR) How personally relevant was the content of the media experience to you? (Not at all / Very much)

2. (23LR) This video experience gave me information about how to behave in real life. (Not at all / Yes)

3. (26LR) The way some of the events I saw/heard occurred is similar to the way events have occurred in my own life. (Not at all / Very much)

Perceptual Realism (PR):

1. (1PR) Do you easily become deeply involved in this video clip? (Not at all / Very much)

2. (4PR) To what extent did you feel mentally immersed in the media experience? (Not at all / Very much)

3. (10PR) How completely were your senses engaged in the media experience? (Not at all / Very much)

4. (21PR) During viewing, I felt immersed into the virtual or imaginary world created by the medium. (Not at all / Very much)

5. (24PR) How emotionally involved were you in the mediated environment experience? (Not at all / Very much)

Empathy (E):

1. (8E) I can empathize with persons in this clip or experience the same feeling with them. (Not at all / Always)

2. (9E) How much did you feel like the events you saw/heard were happening to you? (Not at all / Very much)

3. (28E) How much did you feel yourself closely identify with the characters in this story in media? (Not at all / Very much)

Narrative Meanings (NM):

1. (3NM) The visuals convey the meaning of the story in this video. (Not at all / Completely)

2. (19NM) The language/dialogue of the video is essential for meaning. (Unnecessary / Essential)

3. (20NM) I can fully understand the implications of the story expressed in this clip. (Not at all / Very much)

4. (22NM) I understood the meaning expressed in this video. (Not at all / Yes)

5. (29NM) This clip presented clear and meaningful messages for me. (Never / Yes for sure)

Media Awareness (MA):

1. (7MA) When I watch movies and TV programs I often have to remind myself that it is not real. (Never / Always)

2. (17MA) While viewing this video clip, how aware were you of events occurring in the real world around you? (Not at all / Always)

3. (27MA) My attention was attracted by displaying features of the video instead of the content in it. (Never / Always)

Item Discrimination:

Two statistical criteria were employed to screen items, and check the quality of scales: First, within every scale or sub-scale, all items should be homogeneous, and assess the exact subjective factor which we expect to investigate. In other words, all items belonging to one scale or sub-scale should maintain a high degree of internal consistency. The Cronbach coefficients were used as suitable statistical indicators for content consistency (Carmines, 1987). Second, each item should relate to only the factor which we expect this item to measure, and avoid mingling with items in other scales. Thus, in the factor analysis, all *good* items belonging to the same scale or sub-scale should load the most highly on the same component, and load the least on other components. These two statistical indices became our standards for discriminant validity, and work for the item discrimination in the present study.

Method

Participants:

Participants were 68 undergraduates (18 men and 50 women, mean age = 22.18 years) at Brock University, who were taking a third-year course: *Psychology of Television*. The experiment, about 40 minutes long, was administered during one lecture class at the beginning of the 1999 fall term.

Procedure:

Tests began after the experimenters briefly introduced the experiment. First, participants completed Tellegen and Atkinson's (1974) Absorption Scale (TAS). Then, two short films, about 5 – 6 minutes each, were shown on a projection screen in the front of the classroom. Two films

had been selected after we tested the applicability of many video clips in previous pilot experiments. These two clips (*Angel* and *Pandora*) came from a short film collection – *Unique Perspectives*, and were used wholly uncut with only their titles deleted. Immediately after each film, participants finished one set of the questionnaires and SAM (Self-assessment Manikin, Lang, 1980), which is a brief way to measure individual emotional responses to visual materials. After completing all items, participants were thanked for their participation.

Results

Table 2.1 lists the means and standard deviations of all questionnaire items. Because I just wish to check the quality of items, only the data from one film clip (*Angel*, which is high narrative) were analyzed. The results showed highly skewed distributions of some item scores (e.g. GR3001, SR201, LR2301, and E901), and the means of these items are very low, close to 1. Close attention to these items was paid to determine their quality during item discrimination.

Internal Consistency Analysis:

The reliability of each scale, or sub-scale was tested. Cronbach's coefficients and inter-item correlation matrices were calculated to examine their internal consistency (see Table 2.2 – 2.9).

Sub-scale: General Reality:

Among 5 items assessing the subjective experience of General Reality, the correlate between items ranged from .207 to .534 (see Table 2.2). Cronbach's Alpha (= .787) reached a satisfactory level. Also, we found that item GR1501 had a low correlation with other items, such

as GR1101, and GR3001. Thus, item GR1501 were discarded (after deleting it, Cronbach's Alpha = .783).

Sub-scale: Factuality:

The index of internal consistency for this sub-scale is .690 (Cronbach's Alpha, see Table 2.3). The correlation between item F501 and F1401 is only .204, influencing the quality of this sub-scale.

Sub-scale: Social Realism:

Statistical results showed that the items in the sub-scale Social Realism did not work well. The correlations were about from .30 to .40, and Cronbach's Alpha is equal to .610 (see Table 2.4). Obviously, some revisions need to be made to increase the internal consistency of this sub-scale.

Sub-scale: Life Relevance:

Current results suggest that the items in the sub-scale Life Relevance function well in this study. Their inter-correlations range from .414 to .706, and Cronbach's Alpha is equal to .779 (see Table 2.5). All statistical indicators suggested a satisfactory quality of these items.

Sub-scale: Perceptual Realism:

All items in the sub-scale Perceptual Realism were borrowed from the "involvement" questionnaire in a "presence" study (Lombard & Ditton, 1998). The reliability and validity of these items had been examined and confirmed in repeated experiments in previous research. The data of this study recognized the good quality of these items, again. Both correlate and Cronbach's coefficient reach high value. (See Table 2.6, correlations: from .538 to .810; Cronbach's Alpha = .892)

Scale: Empathy:

According to the theoretical implication of Empathy, I developed 3 items assessing it. Present results show that they are eligible candidates. Inter-item correlations range from .491 to .624) and Cronbach's Alpha (= .779) indicate the satisfactory quality of these items (see Table 2.7).

Scale: Narrative Meaning:

In this scale, I proposed to measure whether participants produced some narrative meanings from the presented messages and absorbed them. The results for the 5 items in this scale suggested that some revisions might be necessary (see Table 2.8). I found that item NM1901 had low correlations with other items. After deleting NM1901, the correlations among items were very high, ranging from .539 to .856, and Cronbach's Alpha rose to .887, reaching an excellent level.

Scale: Media Awareness:

Current results showed very poor internal consistency of these items forming the scale for Media Awareness (see Table 2.9). The low inter-correlation among the three items is quite low indicated that these items could measure different content. It was decided that these items could not form a valid scale assessing Media Awareness.

Factor Analysis:

Pilot Test 1: Raw data: (see Table 2.10)

First, I ran a *principal component analysis* with *varimax rotation* for all items in. Using the criterion of *Eigenvalue* larger than 1.0, 7 factors were retained explaining 72.3% of the variance.

From this result, I found that a few items: MA1701, MA2701, MA1901 loaded separately on components 5, 6, and 7. Although all of the items were considered to belong to the scale Media Awareness, these items have low correlations with one another, and appear in different components in factor analysis. This result suggested that these items could not meet the criterion to form a valid scale with other items.

Three items (PR101, PR2101, PR2401) from the sub-scale Perceptual Realism loaded on component 4. All of them also loaded on component 1. Component 3 contained miscellaneous items from several scales. Component 2 includes all 3 items (F501, F1401, and F1601) from Factuality. A few items from other sub-scales (SR601, E801, GR1301, GR1501, and GR2501) also load on this component. Component 1 is a huge, general factor, in which most of items from several sub-scales: General Reality, Narrative Meaning, Empathy, Perceptual Realism, and Life Relevance, loaded.

Pilot Test 2: Factor analysis after item adjustment:

According to the results of the internal consistency analyses, we eliminated 6 *bad* items: MA701, MA1701, SR201, F1601, NM1901, and GR1301. Then, we ran the factor analysis again (see Table 2.11). Using the criterion of Eigenvalues larger than 1.0, 4 components were retained, accounting for 68.4% of the total variance.

The result displayed a clear picture of the relationship among these items, and is basically consistent with our theoretical construction of scales and sub-scales. The four factors of *reality* sense in mediated experiences were found in the *principal component analysis* with *varimax rotation* performed in the present study. All items from Perceptual Realism loaded on component 2. The item for Media Awareness loaded on component 4. All items from Factuality (F) and Social Realism (SR) loaded on component 3. All items from Narrative Meaning (NM) and Life

Relevance (LR) loaded on component 1. All the items from *multi-dimensional reality* sub-scales loaded above .50 on the component relevant to each of these factors, with no secondary loading above .30. These items obtained a satisfactory level of factor loadings in current factorial analysis results.

The present results are still far from perfect given that the current questionnaire included various scales (Reality sub-scales, Empathy, Narrative Meaning). Basically, for the reality-relevant sub-scales, items from different sub-scales loaded on different components, which indicated that they measure different subjective experiences in participants. When we ran the factor analysis exclusively for these items pertinent to *reality*, a clearer picture emerged: there are three components showing out in factor loading, which suggest the independent dimensions of *perceived reality* in mediated experience.

Item Revision:

Based on the results above, we made some revisions to the pilot questionnaire, eliminating some items with low internal consistency and poor factor loading, and rewording some items to avoid expressing ambiguity.

General Reality (GR)- item 15 was dropped because of its ambiguity and similarity to the sub-scale Social Realism. Four items were retained: 11, 13, 25, 30, among which, item 13 & 25 load on both component 1 & 2, item 11 & 30 load on only component 1 (see Table 2.10).

Factuality (F) – 2 items were retained: 5, 14. Item 16 was removed because it was too similar to item 14. Some rewording was made in item 14. (Item 14: The scenes in video displayed situations and persons that exist in space and time of the real world.)

Social Realism (SR) - 2 items: 6, 12 were retained after being reworded. (Item 6: Regardless of other aspects, the persons and events in this clip are authentic and believable. Item 12: The way events occurring in this clip is analogous to the way they occur in the real world.) Item 2 was dropped because it was too similar to sub-scale "life relevance".

Life Relevance (LR) – All 3 items: 18, 23, 26 were kept.

Perceptual Realism (PR) – All 5 items: 1, 4, 10, 21, 24 were kept.

Empathy (E) – All 3 items: 8, 9, 28 were retained.

Narrative Meaning (NM)– item 19 was dropped because of the significantly low consistency in this sub-scale. The remaining 4 items: 3, 20, 22, 29 were retained.

Media Awareness (MA) – Only one item, 27, was kept after being reworded: Item 27: My attention was attracted by the production or display features of the video more than its content.

There were a total of 24 items in the revised questionnaire. All these final items were arranged in a random sequence to form a new version of the questionnaire. This version was used later in Part 3 of the research: Reality Status Evaluation in narrative mediated experience.

Part 3. Main Study:

Reality Status Evaluation in Narrative Mediated Experience

Hypotheses

In the present study, I will try to study the complicated concept of *reality* in mediated experiences. After selecting the video material in a pretest and developing some scales for measurement, in this main study, I build some models to investigate the role of RSE systems in mediated experiences. I hypothesize that RSEs are *primary mental processes* that function as mediators of general *media reality*. The model definitions include:

Dependent Variable: General perceptual reality – General Reality (GR);

Mediating Variables: All RSEs as *primary mental processes*: Factuality & Social Realism (F&SR), Life Relevance (LR), Perceptual Realism (PR); and Empathy (E);

Independent Variables: Narrative Meaning (questionnaire measurement NM-Q & self-report rating NM-R); Immediate Emotional Responses (Valence & Intensity); Personality – Absorption;

Manipulated experimental conditions: High vs. Low narrative messages (Video Clips 1 & 2).

Reality Status Evaluation:

There are many studies that suggested that there are two or three dimensions in the *reality sense* of mediated experiences. In my research, I measured four self-report factors: Factuality (the direct representations of the physical reality), Social Realism (similarity to physical reality, or truth), Life Relevance (being close, or useful to one's own life), Perceptual Realism

(involvement). Also, I measured a general *reality factor*: General Reality. All of these factors indicate the *primary mental processes* behind reality evaluations.

I limited my current study to *narrative mediated messages* (NMM), and the video materials we chose are obviously fictional, or artificially produced. I argue that mature viewers of mediated messages would quite easily detect the *non-factual* status of these messages, that both stories are fabricated, and these are actors and rehearsed events in the video. While some other scholars found that Factuality was an important dimension of *reality* in mediated messages (Fitch, Huston & Wright, 1993; Potter, 1988), it is highly reasonable to assume that Factuality would not appear as an independent factor in NMMs, but mingle with others. This was partly supported during questionnaire development (see above). Again, we will test whether *reality sense* is a three-factor mental construction in current NMM, instead of a four-factor one.

H1: For the present narrative fictional video materials, Factuality (F) will not emerge as an independent factor influencing *reality sense*, but will mingle with other factors, such as Social Realism (SR).

Narrative Structures:

I have proposed that narrative structures would be very important to reality evaluations of NMM (Waterworth, 2000). As I have indicated, the meaning of *narrative structure* in NMM has two aspects, subjective and objective. From the objective aspect, *narrative structure* means the *story structure* in mediated messages, which accords with the *narrative templates* in cognitive processes. From the subjective aspect, *narrative* means the extent to which the viewer gets the narrative meanings, understands *the vicissitudes of intentions* during the processes of

communication. We designed experimental procedures in this research to investigate these influences on reality evaluations.

The essence of subjective narrative meanings is to understand the *intentionality* in NMM. In other words, to understand narrative meanings of NMM is to understand the *intentionality* of characters and authors. So, I argue that Empathy should mediate the effects of Narrative Meaning on reality evaluations. Narrative Meaning has its effects because viewers *identify* with the characters in films. Then, viewers would feel more *involved* in the mediated world, feel the film is more *life-relevant* to themselves, which would further enhance reality sense.

H2: The subjective *narrative* factor, understanding the Narrative Meaning (NM), will impact viewer's *reality sense* through the mental processes: Empathy (E), Perceptual Realism (PR), and Life Relevance (LR).

In its objective aspect, the literal meaning of *narrative structure* is the *story structure*. Obviously, mediated messages have objective degrees of difference in their *story structure*, which would affect significantly viewers' explanations of them. We tested various video materials in several previous pilot experiments. Participants and researchers rated *story structure* (both audio and visual aspects), and two video clips were chosen for their high or low degrees of *narrative structure*.

For the video clip with *high narrative story structure*, people are expected to explain the narrative meanings on the basis of its *story*. Participants will perceive them in a similar way, or have a similar story structure about them. Thus, Empathy, identifying with characters, will play a main role in reality evaluations. But for the *low story structure* video clip, participants will explain its narrative meanings in their own ways, because low story structure, by definition, does not provide a clear story. The *empathy* with characters in the film will not be guaranteed. In other

words, people will *create* their own *narrative meanings* from these messages, which is a *mental process* totally different from *empathy*. In this case, I argue that subjective explanations of narrative meanings will show their strong and direct influences on reality evaluations.

H3: For the *low narrative story structure* video material, subjective ratings of Narrative Meaning (NM) will have direct influence on reality evaluations. Empathy (E) will play a more important role in *reality sense* in the *high story structure* video clip.

Emotional Responses:

There are two main dimensions in emotional responses: valence and intensity (Lang, 1995). I have argued that emotional factors might influence RSE through two hypothetical processes: First, Emotional Intensity has positive effects on *reality*, we simply have less cognitive energy for reality evaluations in high arousal state. Second, Emotional Responses are a natural part of *narrative structures*. When associated with emotional responses, NMM are more likely to be perceived as *real*. Thus, our theoretical reasoning predicts the positive relationship between emotional responses and reality evaluations. Emotional Intensity will have stronger effects on the *reality sense*. Also, I have discussed that, the preference (Emotional Valence) would influence cognitive processes to a significant degree. I hypothesize that Emotional Valence would have a positive relation with the reality evaluations. We hypothesize that emotional responses would mainly influence participants' Perceptual Realism in NMM.

H4: When NMM evoke strong emotional responses (including both dimensions: Emotional Valence and Intensity), viewers are more involved. Emotional Responses should work through Perceptual Realism (PR).

Absorption:

I argue that the personality trait Absorption (AB) influences RSE in NMM. When those messages are fictional and ambiguous, high absorbers always use their own imagination to *create* narrative meanings out of those messages. So Absorption would influence the degree to which viewers make narrative meanings in NMM. Also, I have argued that factuality and instrumental cues (utility) in NMM would be more important for low absorbers. So, I hypothesized that, Absorption, rather than have a direct effect on RSE, will be mediated by other *dimensions*, such as Social Realism and Life Relevance.

H5: Personality trait Absorption (AB) will be positively related to the mental process factors: Perceptual Realism (PR), Life Relevance (LR), and Social Realism (SR).

Two statistical methods are employed to test the above hypotheses: regression analysis and structural equation modeling (SEM) (Kline, 1998). A model describes the intricate relationship among reality evaluations in NMM (see Figure 3.1).

Model Hypothesis

Reality Status Evaluations in Narrative Mediated Messages (Figure 3.1)

Brief Explanation of SEM & EQS Models:

In structural equations modeling, two types of variables can be distinguished: (a) manifest variables, which are observed or measured directly; and (b) latent variables, which are derived from manifest variables and represent "true" measures free of measurement error. When a manifest variable has been measured through a multi-item test, it is possible to create multiple

indicators of the variable by breaking down the test into a number of sub-scales. In the current study, we have developed sub-scales and scales. After being tested repeatedly to examine their reliability and validity, the scores of these scales were treated as manifest variables entering SEM models directly (Kline, 1998; Valkenburg & Vandervoort, 1995).

We used a model to describe the intricate relationship in reality evaluations in NMM (see Figure 3.1). Four factors, Absorption, Emotional Valence, Emotional Intensity and Narrative Meaning, entered the models as independent variables. General Reality was used as the dependent variable, and the multi-dimensional reality evaluations, including Perceptual Realism, Social Realism, and Life Relevance, as mediators. Also, the mediator Empathy was considered in the models. The two-way arrows on the left side of the figure indicate that the model permitted correlation between independent variables. Also, the independent variables have covariance with each other, which should be considered in model testing. The directions of arrows indicate the influences of the independent variables on the mediators and the dependent variable.

The statistical software EQS was used to assess whether or not this model would be supported by the present data. If the Chi-squares representing the fit of the hypothesized model are non-significant, the hypothesized model is accepted, indicating that these hypothesized relations among factors in mediated experiences are supported by present data. If the Chi-square values are significant, the hypothesized model is rejected and Post-hoc steps will be taken to determine other possible paths in this model. The standardized values will be used to determine which paths will significantly improve the fit of the model. The new models will be accepted if the Chi-squares representing the fit of these models become non-significant.

Method

Participants:

One hundred thirty eight university students were recruited from the course Introduction to Film Studies. The participants were first- or second-year college students, most of them majoring in Communication Studies. The data of 24 students were deleted because of random responses or omissions. The remaining 104 participants included 50 males and 64 females, with a mean age of 19.60 (SD = 1.9527).

Materials

Absorption scale – TAS:

According to Wild, Kuiken, and Schopflocher (1995), the TAS (Atkinson & Tellegen, 1974) was originally developed to identify personality characteristics related to hypnotic susceptibility. The current scale consists of 34 true-false items (see Appendix 3), such as: "The sound of a voice can be so fascinating to me that I can just go on listening to it." Psychometric evaluation indicates that the scale is essentially uni-dimensional (Wild, Kuiken, & Schopflocher, 1995). The number of *true* responses to the questionnaire items is reported as the score for Absorption.

SAM – Self-Assessment Manikin:

The participants' immediate emotional responses were measured with the SAM – Self-Assessment Manikin (see Appendix 3). This picture-oriented instrument directly assesses the emotional valence and intensity in responses to an object or event (Bradley & Lang, 1994). The paper-and-pencil version of the SAM illustrates its nonverbal, graphic depiction of various points along each of two major affective dimensions. The SAM ranges from a smiling, happy figure to

a frowning, unhappy figure when representing the valence dimension, and ranges from an excited, wide-eyed figure to a relaxed, sleepy figure for the intensity dimension. The participants can place an "x" over any of the five figures, or between any two figures on each scale, which results in a 9-point rating scale for each dimension. The SAM has been used in many previous studies (Bradley & Lang, 1994; Lang, 1995; Lang & Friestad, 1993), and has been recognized as an easy, non-verbal method for quickly assessing people's reports of immediate affective experience. It has been used effectively to measure emotional responses in a variety of situations, including reactions to pictures, images, sounds, advertisements, etc. In the present research, experimental materials are films, the NMM. This study is a good attempt to use the SAM in a new experimental situation.

Narrative Meanings Self-report Rating (NM-R):

In addition to the questionnaire measure of Narrative Meaning (NM-Q) I developed, I designed an alternative procedure to measure how viewers derived meanings from mediated messages. I employed techniques from relevant research about the "conceptual / integrative complexity" (Baker-Brown, Ballard, Bluck, de Vries, Suedfeld, & Tetlock et al. 1992) for reference. We think that every viewer construes subjective meaning during viewing. But, there exist differences in how deeply viewers process those messages, and they arrive at different levels of meaning even after viewing the same visual material. For example, some viewers can only give simple descriptions about the messages they just viewed, but others may derive complex inferential meanings from them. Sometimes, viewers created a totally idiosyncratic, multi-level, and integrative *meanings* out of visual messages. Viewers' descriptions is another way to measure Narrative Meaning, which undoubtedly is an important dimension of narrative mediated experience. In this study, we devised criteria to rate the level of *abstract / integrative*

meanings the viewers understand from the video materials (see Appendix 2). In the actual experimental administration, we asked participants to write down briefly the meanings of the present video clips they just viewed, then two raters (Professor Preston and myself) rated these self-reports, and agreed on a score for each viewer according to these standards.

We designed two methods: self-report rating (NM-R) and the scale (NM-Q, see above in questionnaire development), to measure viewers' subjective comprehension of narrative meanings of the mediated messages. As a concept which is studied relatively less in media research, the impacts of *narrative structure* on reality evaluations was investigated from different perspectives. The present study tries to find a better way, or a suitable measurement tool, which would have excellent statistical quality, to explore the cognitive processes behind *narrative* comprehension.

Procedures:

In the experiment, participants first were required to complete & Atkinson's Absorption Scale (TAS, Wild, Kuiken, & Schopflocher, 1995). Then, two short films, high and low narrative messages, were played on the projecting screen at the front of the classroom. Immediately after each film, participants completed a set of measurements, which included: the questionnaire consisting of all scales about *reality status evaluations* (GR, PR, LR, SR), Empathy (E) and Narrative Meaning (NM-Q) (see above questionnaire development, or Appendix 1), SAM (Self-assessment Manikin, Lang, 1980) which measured individual emotional responses to visual materials, and the open-ended self-report of the narrative meanings (NM-R) that viewers derived from the film clips. After finishing all their answers, participants were thanked for their participation.

From the questionnaire, the total scores of every sub-scale and scale were calculated for each film. From a factor analysis of the current questionnaire scores (see Table 3.3), I found that a spelling mistake existed on the final page of the questionnaire, which affected meaning. Thus NM201 was found to have problem, and was removed from calculations.

According to the initial criteria established for rating the self-reports of narrative meanings (NM-R, See Appendix 2), the two raters rated these self-report independently, achieving a rate of first-time agreement of above 76.44%. Then, definitions of the criteria were refined as follows:

Case Elimination: the reports of these participants who omitted items or responded in a random fashion were eliminated.

Level 0 – **no response**, e.g. left blanks; or "have no idea", "have no clue."

Level 1 – **simple descriptors**, simply repeating those events shown in clips: e.g. "a woman is doing laundry, then raise her baby." "a girl met a guy…"

Level 2 – **simple inferential meanings**, abstract concepts emerged, such as "about freedom." "peace vs. war", but there was no explanation.

Level 3 – **complex inferential meanings**, there are at least two aspects, or components of film meanings being mentioned in the report. They were connected with each other and some explanations were given.

Level 4 – **integrative meanings**, all contents shown in films were integrated as a whole.

(See Appendix 2)

Finally, researchers rated the rest of the reports using the revised criteria and achieved an inter-rater reliability of 100%.

Results

Data Description:

In this university student sample, the mean score for the Absorption Scale was equal to 21.04 with a standard deviation of 5.77 (Minimum = 6, Maximum = 34, see Figure 3.2). This distribution is consistent with the norm and results in previous studies (Wild, Kuiken, & Schopflocker, 1995).

Reality Evaluation:

Factor analysis results:

The means and standard deviations of all items for video clip 1 and 2 are listed in Table 3.1 and 3.2. To investigate the dimensions of reality evaluation in the current materials, we repeated the factor analysis procedure of questionnaire development using the present data. The quality of these items was checked again. Because of an error in wording for **item 12,** this item was deleted. Because this questionnaire includes items measuring not only *reality sense*, but also Narrative Meaning (NM), and Empathy (E), I first ran the factor analysis with all 22 questionnaire items in. Then, we considered only those 15 items belonging to *reality factors* to form the *reality* scales. The factor solution was analyzed without NM (Narrative Meaning), E (Empathy) and MA (Media Awareness) items. Because I wished to confirm the quality of the items, I followed the same statistical procedure as I used in the questionnaire development and also used only the results of video clip 1 (high narrative messages) (see Table 3.3 and Table 3.4). All factor coefficients larger than .50 were identified for interpretation.

Table 3.3 displays the results of the factor analysis for the questionnaire items (Media Awareness (MA) item was deleted.). Four components with Eigenvalues larger than 1.0 were

obtained using principal component analysis. The rotated results show a clear factor structure.

Factor 2 is a Perceptual Realism factor, labeled as PR. All PR items load most highly on this

component, ranging from .510 to .830. Also, their factor loadings on other components are very

low, most of which are lower than .25 (with PR1801 as an exception). This suggests that PR

items always worked as a good tool to measure Perceptual Realism. Component 3 is a Narrative

Meaning factor, loaded by only NM items. Three NM items load very high on it, all above .60,

and low in other components, most below .25. Factor 4 is Social Realism, loaded by F

(Factuality) & SR (Social Realism) items with the loading values arranging from .664 to .787.

The low loading values of these items on other components, all below .27 suggest the good

quality of these items. Factor 1 is loaded by GR (General Reality), E (Empathy) and LR (Life

Relevance) items, implying a *general reality and identification* factor. NM201 seems to be a *bad*

item. It seems not to work well along with other NM (Narrative Meaning) items in the current

results. Also, I found that some E (Empathy) and GR (General Reality) items, such as E601,

GR901, GR1101 and GR1901, load highly on more than one component. Some of these factor

loadings are around .45. Basically, I explained them as a necessary result derived from our

theoretical construction in questionnaire development, because I designed GR items to measure

general reality sense during video-viewing, which should be related to all other *reality* factors.

We will get a clearer picture in the next factor analysis.

Results of the factor analysis in Table 3.4 show that the current *reality* questionnaire

worked very well. Three factors having Eigenvalues greater than 1.0 were obtained using the

principal component analysis procedure. All items loading high on one factor are low on other

factors. Factor 1 is the Perceptual Realism factor with all PR items loading very high on this

factor (from .594 to .835), and very low on other factors (most of them below .25). Factor 3

suggests a Social Realism factor, loaded by both F and SR items. These items work together very well, loading above .60 on this factor, and low (below .35) on other components. Factor 2 is loaded mainly by LR items, implying a Life Relevance factor. Factor loadings are high on this factor (above .60), and low on other factors (most below .30). GR items have been designed to measure General Reality, thus, it is quite reasonable to find that they would be loading on all three factors.

Because the video materials in this experiment are evidently fictional, no Factuality would be considered by mature viewers in these mediated messages. The data from the current study support this idea. They showed that F (Factuality) and SR (Social Realism) collapse as one factor Social Realism. For participants, F items mean the same thing as SR items. This result suggests that it should be unsuitable to consider Factuality as an independent factor in fictional mediated messages. H1 was supported by current factor analysis results. The Factuality in NMM did not emerge as a separate factor working on *reality sense*. The current results suggested that Factuality (F) items were perceived as the same as other Social Realism (SR) items. Thus, we will combine these items in all following data analysis. This result also is consistent to those from regression analyses (see below).

All means and standard deviations of all measurements, scales, and self-report ratings are shown in Table 3.5.

Regression analysis results:

We used regression analysis to investigate the hypothesis that *reality* in fictional mediated messages would be a 3-factor concept instead of a 4-factor one. The totals of all item scores in each sub-scale were calculated and used as scores for General Reality, Factuality,

Social Realism, Life Relevance, and Perceptual Realism, respectively. Although there is no independent Factuality factor showing in the factor analysis according to the above results, I still want to test H1 again in the regression analysis, so I employed separate scores for Factuality and Social Realism, rather than a combined score, to enter regression equation.

Simultaneous regressions were run for both video clip 1 & 2 with General Reality as the dependent variable, and Factuality, Social Realism, Life Relevance, and Perceptual Realism as the predictors (see Table 3.8 and 3.9).

The results of the simultaneous regressions show that, for both video clips, semi-partial correlates of Factuality are not significant. In other words, the amount of variance of General Reality scores explained independently by Factuality scores is not significant in both cases (Significance Coefficients are .183 and .713 respectively, Table 3.8 and 3.9). Also, if the variable Social Realism does not enter regression equations, the regression coefficients of Factuality become significant. But, when both Social Realism and Factuality enter together, the part of the variance that has been explained by Factuality in the above situation is now explained by Social Realism (SR). These results support the idea that, in NMM, "reality" is not a four-factor concept, but a three-factor one. For Factuality and Social Realism, no matter which one was entered first, the semi-partial correlation coefficient of the other one was not significant, indicating that it did not explain a common component of the variance of General Reality. In other words, Factuality and Social Realism explain the same section of the variance of General Reality. So, it should be reasonable to **combine items of both Factuality (F) and Social Realism (SR) into one factor.**

Narrative Structure:

Stepwise regressions were run with General Reality (GR) as the dependent variable, and Factuality & Social Realism (combining items from both F and SR), Life Relevance, Perceptual Realism, Narrative Meaning, Absorption, and affective Valence and Intensity as the independent variables (see Table 3.10 and 3.11). Because Empathy and Life Relevance did not appear as two separate components in our above factor analysis of the questionnaire, we did not put Empathy into this list. In this stepwise regression procedure, variables are entered into the equation as the predictors until new variables that still did not enter regression equations no longer explain a significant part of the variance of the dependent variable General Reality. In the final step of the regression analysis, some variables were not entered into the regression equation, which indicated that their zero-order effects would be mediated by those predictors already in regression equation (see Table 3.6 and 3.7).

The results show, in both of the video clips, three subjective factors, Life Relevance (LR), Perceptual Realism (PR) and Factuality & Social Realism (F&SR), entered the stepwise regression equations (see Table 3.10 and 3.11). In other words, each of them explains independently a significant amount of variance of General Reality. This is consistent with our hypothesis that these three factors represent different dimensions of *reality sense* in NMM. Other factors, such as emotional intensity, though they may still have an important impact on *reality sense*, would work through these three dimensions. In the present data, the zero-order correlations between General Reality and other factors, such as Absorption, Valence, Intensity, and Narrative Meaning, are all significant. When these three main dimensions are entered into regression equations first, the semi-partial correlates of remaining variables are negligible. However, for video clip 2 (low narrative messages), in which there is no clear story structure,

Narrative Meaning (scale measurement, NM-Q) appeared as a significant factor which independently influenced viewer's *reality sense*. Narrative Meaning (NM-Q) independently explains a significant amount of variance of General Reality, just as the three main dimensions of reality evaluation scores do. In other words, for the low narrative messages, understanding the narrative meanings seems to be crucial to reality evaluations.

These results partly support my hypothesis H2 (see table 3.11). For video clip 2 - the *low story structure* messages, Narrative Meaning (NM-Q) has a direct influence on General Reality scores. The basic dimensions of *reality*: Social Realism, Life Relevance, and Perceptual Realism can not explain the effect of the variable Narrative Meaning (NM-Q) in *low story structure* video materials. H2 and other hypotheses will be tested in the following EQS model analyses.

EQS model analysis

Narrative Meaning (scale-measurement, NM-Q) as predictor:

Finally, we use the structural equation modeling program EQS to investigate the model hypotheses. Original hypothesis models were tested in current data. The relations among these factors were examined simultaneously in four separate EQS analyses. First, I used the questionnaire scores as the measurement of Narrative Meaning. These original hypothesis models were rejected with $p < .01$. This means that these models were not accepted as adequate descriptions of the relations behind the current data, though they still explained a great part of variances of variables.

Then, post-hoc methods were employed. Some paths which were not significant in original hypothesis models were deleted, then paths were added in as long as their standard values were significant $> .05$ level. Two final models are shown in Figures 3.3 and 3.4, Tables

3.12 and 3.13 (Chi-square (df=15) = 13.152, p = .59 for video clip 1; and Chi-square (df=12) = 7.933, p = .79 for video clip 2). The indexes of *goodness of fit* indicate that these two final models fit the current data very well (Bentler-Bonett Fit index = .970 for video clip 1 and .985 for video clip 2).

Compared to original hypothesis models, I found that most of hypothesized relations were supported in the final models by the current data. The direct influences on the *reality sense* of Empathy (E) in the *high narrative* messages video clip 1, and Narrative Meaning (NM-Q) in the *low narrative* messages video clip 2, were found in the final models. Both of them are significant < .0001 level (standardized estimates are equal to .517 for Empathy (E) in video clip 1; .304 for Narrative Meaning (NM-Q) in video clip 2). In the high narrative mediated messages, Empathy has a strong *direct* effect on reality evaluations, while this effect is replaced by Narrative Meaning (NM-Q) in low narrative messages. The hypothesized influence of Absorption on Perceptual Realism was supported in the two kinds of NMM, and both of them are significant < .05 level (standardized estimate .142). But, Absorption effect on Life Relevance was only found in low narrative messages (Sig. < .05 level, standardized estimate .161). We have predicted that emotional responses would affect reality evaluations because they would lead to a higher level of involvement during mediated experiences. This hypothesis seems to be supported in only video clip 1 (standardized estimate .324, p < .0001 for Emotional Valence; and standardized estimate .202, p < .01 level for Emotional Intensity), and partly in video clip 2 (only for Emotional Intensity, standardized estimate .374, p < .0001 level). These results suggest that Emotional Valence is more important in *high story structure* video material, while Emotional Intensity is more important in *low story structure* video material. Also, the current results display the consistent effects of Narrative Meaning (NM-Q) on each dimension of reality evaluations in

both video clips (see Figures 3.3 and 3.4, p < .001 in video clip 1; and < .0001 in video clip 2 for Perceptual Realism and Life Relevance). But, both final models showed that the effects of Narrative Meaning (NM-Q) on Social Realism were relatively weak (only p < .05 level in video clip 2). Finally, the two post-hoc models in Figures 3.3 and 3.4 display significant mediated effects of Empathy for Emotional Intensity and Narrative Meaning (NM-Q) (standardized estimates: .391 (p < .0001 level) for Narrative Meaning (NM-Q) and .269 (p < .01 level) for Emotional Intensity in video 1; and .585 (p < .0001 level) for Narrative Meaning (NM-Q) and .254 (p < .001 level) for Emotional Intensity in video 2).

Narrative Meaning (self-report rating measurement, NM-R) as predictor:

When I used NM-R, the rating scores of self-report as the measurement of Narrative Meaning, we got two post-hoc EQS models in Figures 3.5 and 3.6, Tables 3.14 and 3.15 (Chi-square (df = 16) = 19.638, p = .24 for video clip 1; and Chi-square (df = 12) = 15.909, p = .20 for video clip 2). The indices of *goodness of fit* indicate that these two models fit the current data well (Bentler-Bonett Fit index = .953 for video clip 1; and .963 for video clip 2).

Current results with self-report ratings as the measurement of Narrative Meaning supported some of the hypotheses. The influence of Empathy on the *reality sense* was shown in the final model of video clip 1 (p < .0001 level, standardized estimate is equal to .530); but Narrative Meaning, when measured by self-report ratings, did not display a direct effect on the *reality sense* as expected in video clip 2. The hypothesized influences of Absorption on Perceptual Realism were supported in the two types of NMM, and both of them are significant < .05 level (standardized estimate = .166 for video clip 1; and .150 for video clip 2). But, the effects of Absorption on Life Relevance were only found in low narrative messages (p < .05 level, standardized estimate = .151). Also, our hypothesis that emotional responses would affect

reality evaluations through the function of Perceptual Realism was supported in both video materials (standardized estimates are .369 (valence) and .220 (intensity) for video clip 1; and .152 (Emotional Valence) and .377 (Emotional Intensity) for video clip 2). Current measurement of Narrative Meaning (NM-R) displays relatively weak influences during the processes of reality evaluations. Self-report ratings of Narrative Meaning have their influences on limited factors in two types of video messages: significant impacts on Life Relevance and Empathy for video clip 1 (standardized estimated are .710 (to Life Relevance and .282 (to Empathy) respectively); and only an influence on Empathy for video clip 2 (standardized estimate is .198). Finally, the two final models show the strong effects of Empathy on all factors involved in reality evaluations processes (see Figures 3.5 and 3.6).

Discussion

This research follows the track of previous studies of reality sense in mediated experiences. We face the same questions as other researchers: what is *reality sense* in narrative mediated experiences? Which factors influence our reality evaluations of those mediated messages?

What is the *reality sense* in mediated experiences?

To investigate this question, a researcher can simply ask his participants: Are these messages real? This is a straightforward question, and we asked similar questions in my research, too. But, most researchers found that this was not enough. People may judge a message as *real* for a variety of different reasons, and different mental processes may have their impacts on this

judgement. For one person, a mediated event may be evaluated as *reality*, because it was perceived as having actually happened, but for another viewer, because it was just believable and similar to the actual world. The key reason for why this happens is that viewers do not employ simply the single standard *actuality*, but multiple criteria, to evaluate mediated messages as *real*. I found that previous studies had identified four factors as pertinent to *reality sense* in mediated experiences: Factuality, Social Realism, Life Relevance and Perceptual Realism. (*Note: Different researchers have used different terminology. I employed uniform terms in this paper to indicate similar concepts.*) I developed some scales to measure these dimensions. The statistical methods of internal consistency and factor analysis were used to help us select reliable and valid items. The results confirmed that, for NMM, Factuality operated as part of the dimension of Social Realism, and it did not appear as an independent factor. The primary dimensions of *reality sense*, then, consist of three dimensions: Social Realism, Life Relevance, and Perceptual Realism. I have argued that Factuality would not be an independent component of *reality sense* for NMM. Factuality was identified as a *reality* dimension in studies that concerned *general* mediated messages, including non-fiction messages such as news and documentaries to which the factual basis of content is important. Second, regression analysis supported our hypothesis that the three mental processes (PR, LR and SR) are independent dimensions of *reality* in narrative mediated experiences. Third, other factors aside from these three main dimensions, such as personality – Absorption (AB) and immediate Emotional Responses, should influence our reality evaluations through mediators. Though those *other factors* have significant zero-order correlation with General Reality scores, they don't explain unique variance in simultaneous regression analyses.

<u>When we talk about the *dimensions* of *reality sense*, what do they actually imply?</u>

The answer to this question is a key issue in the theoretical construction of the present research. I have argued that there are automatic mental processes behind viewers' mediated experiences, also behind our reality evaluations about NMM. When viewers feel that certain mediated messages are real, there are cognitive and affective processes functioning unconsciously, I argued. Usually, a viewer doesn't even realize very clearly why the *real* sense about certain messages is so strong. One of the purposes of my research is to investigate those *reasons* why viewers feel a sense of reality. If I have considered all mental processes pertinent to reality evaluations as some *factors*, it is necessary to make some distinctions among them now. I would like to label some *direct* mental processes, such as Perceptual Realism, Life Relevance, Social Realism, and Factuality, as *primary mental processes*, or *dimensions* of *reality sense*. When we look more closely at them, we can say that they are not only simple judgements, but immediate mental processes behind our subjective states. I have explained *reality sense* in my theoretical discussion as the *default value*, which means that as long as these primary mental processes are operating, the *reality sense* is maintained to some extent. Also, I would regard other mental variables in this study, especially personality and emotional responses, as *other factors*. These *other factors* help enhance our mediated experiences through these *primary mental processes*. When I refer to processes as *primary*, I don't mean that some mental processes are fundamental, and other factors, such as immediate emotional responses, are not. But from the theoretical perspective, I suggested that these *primary* dimensions have closer relations to RSE system than other factors. Also, I agree that neither regression equations nor factor analysis can help build or support this theoretical construction. But current statistical results are consistent

with the hypotheses about the tight relationship between those *main dimensions* and *reality sense*.

My question became: Are these four dimensions, including Perceptual Realism, Life Relevance, Factuality and Social Realism, the ONLY dimensions of *reality sense*? My answer may be "no". Then, we can ask: Which other factors, which can't be mediated only by these *dimensions*, have their direct impacts on *reality sense*? It is highly possible that they would be the other *dimensions* of *mediated reality*, or the other immediate primary mental processes influencing directly our reality evaluations in mediated experiences. In the current research, I have studied two possible candidates: Narrative Meaning and Empathy.

What is the function of Narrative Meaning in NMM?

Another key concept in media research is the *narrative*. One of our basic hypotheses is that Narrative Meaning should play an important role in *reality sense*, especially in fictional narrative messages. There is relatively less previous research about *narrative*. I designed two ways to assess participants' understanding of *narrative meanings* in mediated messages: questionnaire (NM-Q) and self-report ratings (NM-R). The methodological distinction between them makes differences in theoretical implications unavoidable. In the questionnaire measurement (NM-Q), I asked participants with a few items whether they understood the *narrative meanings* of these video materials, whether they got the film messages. In NM-R, we required participants to report in writing what the meaning of the film clips they understood was. Here, the viewer is indicating his/her own evaluation or interpretation of his/her narrative comprehension. Then, researchers rated these reports and evaluated the degree to which the

viewers made inferences, or derived abstract meanings from these messages. We supposed that these two measurements would imply some homogeneous information and did find a moderate correlation between them in the present data. However, the final results of model hypotheses suggest that these two measurements have different predictive potentials.

The experimental results with questionnaire measurement supported the idea that understanding *narrative meanings* of NMM is extremely important for the reality evaluations. The influence of Narrative Meaning (NM-Q) seems to be more crucial in *low story structure* messages than in *high story structure* messages. There is a significant *direct* path significant in the final post hoc EQS model of *low story structure* messages. I explain this result as follows: for NMM, understanding the *narrative meanings* of these messages would be a fundamental mental process for reality evaluations. In *low story structure* messages, in which there is not a clear story, the mental process of understanding *narrative meanings* has a direct influence *on reality sense*. Viewers actively derive *narrative meanings* from these messages, and this process itself requires more mental energy, involves participants into the idiosyncrastical world of *meanings* they create for themselves, and finally makes them feel that the NMM is more *real*. Meanwhile, in *high story structure* messages, to understand the *narrative meanings* is to absorb the already existing *story structures*, which are common for every viewer. Whether or not this *story* would involve participants into it, or be relevant to their own life, etc., would decide whether these messages would be rated as *real*. The impact of this process would be mediated by those *primary mental processes*. Therefore, in *high story structure* messages, Narrative Meaning (NM-Q) has its influences through those factors such as Perceptual Realism or Life Relevance. Only in ambiguous, *low story structure* messages, is understanding *narrative meanings* a *direct*, immediate, active mental process, or another *dimension* of reality evaluations enhancing the

reality sense. In *high story structure* mediated messages, to understand *narrative meanings* is equal to understand the objective *story frame* in these messages, which is a relatively *passive* mental process, and only works as an indirect factor influencing the *reality sense*.

Then, we may ask: What does the *direct* influence of understanding *narrative meanings* from *low story structure* messages mean? What is the difference between the *direct* and the *mediated* influence of Narrative Meaning of NMM? First of all, I argued that the *story structure* in NMM should be continuous, instead of dichotomous. Even a film with the highest degree of narrative structure, which presents a very clear story common for every viewer, contains a sequence of shots, and the viewer understands meanings within and between those shots, and constructs actively *narrative meanings* from these visual messages. When we judge a film as *high story structure*, we suggest an obvious, clear story in this film for every viewer with common sense. In contrast, the messages with *low story structure* are ambiguous, and each viewer has to make sense out of them for him/herself. For NMM with *high story structure*, there are stable, uniform *narrative meanings* behind the visual material for each viewer, or a time-space-causality construction as the *fabula* discussed in Bordwell's *classical narration theory*. Bordwell (1980) has argued that the purpose of these visual messages is to help viewers build this particular time-space-causality construction in their mind. Whether or not this story involves the viewer with its Perceptual Realism, relevant to viewer's own life, or similarity to *social reality*, will decide the viewer's subjective evaluations about this story as *real* or not. But for NMM with *low story structure*, each viewer would construct unique, idiosyncrastical *narrative meanings*. I argued that these unique narrative meanings themselves - the comprehension by each viewer that may differ significantly from another's understanding, are constructed as part of the viewer's subjective *mental reality*. Therefore, one of the main findings of my present study is

that, for *low story structure NMM*, understanding narrative meanings itself has a close relationship with viewer's subjective *reality sense*, and this relationship can't be explained, at least not entirely, through the influences of other *dimensions* of reality evaluations in mediated experiences, such as Perceptual Realism, Life Relevance and Social Realism.

When I used the self-report ratings (NM-R) as the measurement in model testing, I found that the influences of Narrative Meaning in NMM are not so obvious as when using questionnaire measurement (NM-Q). The ratings reflect the cognitive complexity of viewers' verbal expressions of the narrative meanings. In the final models, Narrative Meaning (NM) have a moderate impact on Empathy (E), but its *direct* paths on reality evaluations and the three *reality dimensions*, as were shown in previous models with questionnaire measurement (NM-Q), disappeared (except for LR in the *high story structure* condition). As a result, model paths from Emotional Responses (Valence and Intensity) or Absorption to the *dimensions* of reality evaluations increased to higher significant levels. I explain this result through the unique feature of EQS model. All those factors, including Narrative Meaning, Absorption and Emotional Response (Valence and Intensity), covariated with one another, and the covariance among them was taken into consideration in the present model hypotheses. When the predictive ability of Narrative Meaning measurement (NM-R) became weaker, the part of variances of dependent variable and mediators which NM-R explained was less. Then, those variances could be explained by *other factors* such as Absorption and Emotional Responses, and their influences on these *dimensions* of reality evaluations began to present themselves in the final EQS models. Obviously, the self-report measurement of Narrative Meaning (NM-R) does not display its significant role in influencing reality evaluations any more. When this measurement didn't

explain the variance of General Reality and those *dimensions* of reality, however, the predictive potentials of Absorption and Emotional Response increased.

I argued that, self-report ratings (NM-R) focused more on whether participants produced *abstract* inferences and *integrative* meanings from these messages, which we believe to be the indicator of the higher level of understanding narrative meanings. But, in fact, this measurement may have implications significantly different from the questionnaire measurement (NM-Q) in current mediated messages. The questionnaire measurement (NM-Q), which just asked people whether they have gotten ideas from NMM, and didn't ask specific questions about what these meanings are, has better predictive potential for reality evaluations than self-report measurement (NM-R). This result made us think that the *narrative meanings* of NMM included multi-level, diverse content, not only those *abstract, integrative* meanings that we think are important. When we rate participants' reports about their understanding of narrative meanings, perhaps those reports do not include those elements most crucial to reality evaluations. So, our ratings based on the level of *abstraction* and *integration* of narrative meanings did not indicate the intricate implications of Narrative Meaning in viewers, and NM-R had different predictive potential than the questionnaire measurement (NM-Q).

What is the influence of Empathy?

The experimental results of Narrative Meaning lead us to think about the influence of Empathy on NMM, too. As I have discussed in the Introduction, there are different manners of *empathy*, such as empathizing with characters, identifying with the *point of view* (POV) of the camera, or identifying with *an omnipotent observer*. We measured with some questionnaire items only one of them: "empathizing with the main characters". The current data suggest that, in

high story structure mediated messages, Empathy (E) has direct influences on General Reality (GR). As long as there is a clear *story*, Empathy is one of the most important mental processes directly influencing *reality sense*. But, this effect can't be guaranteed in *low story structure* messages, in which the impact of Empathy is mediated by the *dimensions* of reality evaluations. In all these final EQS models about mediated experiences, we found a strong relationship between Empathy and those main *dimensions* of reality evaluations: Perceptual Realism, Social Realism, and Life Relevance. But the direct relation between Empathy and General Reality, after partialing out the mediating impacts of those main *dimensions*, was found only in *high story structure* messages. I pointed out that identifying with the characters in a story is highly likely to be a primary mental process going on behind reality evaluations. The influence of this *mental process* is particularly strong, and is only partially explained through those mediators as long as there is a clear story frame in the NMM. The same pattern was found in all models with self-report ratings (NM-Q) of narrative meaning or questionnaire items (NM-Q) as measurements, although the influence of the former is relatively weaker than the latter in the present study. I have argued that, when the predictive potential of NM-R was weaker, the paths of *other factors* reached higher significance levels. But, the strong *direct* path from Empathy to General Reality in *high story structure* messages appeared in both models with NM-Q or NM-R. Thus, we can reject the possibility that it is because the influence of Narrative Meaning was considered in model hypotheses that the impact of Empathy was distorted and disappeared, especially in *low story structure* mediated messages. So, two basic findings about Empathy from the present results of EQS models, the direct impact of Empathy on General Reality in the *high story structure* messages, and the close relations of Empathy with all three *dimensions* of reality evaluations, are consistent with our hypotheses.

I would point out that one potential problem with these results involves the loading, during questionnaire development, of Empathy and Life Relevance items together on the same factors. Does this, in fact, bias the interpretation of EQS models? These items about Empathy (E) always loaded on the same component with the Life Relevance (LR) items in factor analyses in both questionnaire development and the final formal experiment. A viewer could *empathize* more easily because those mediated messages are more life-relevant, or more useful for him/herself. If these two *factors* mix together in the empirical study, it would be difficult to know what the *true* role of *empathy* in mediated experiences is, and how its impact differs from Life Relevance. But, I would like to point out that Empathy may share variance with Life Relevance because both of them involve evaluations of personal meanings to viewers, but they do have independent variance as well. This is somewhat confirmed by the correlation of Absorption with Empathy, but not with Life Relevance. Thus, I still entered Empathy into EQS models as a separate mediator to investigate its intricate influences on reality evaluations.

Finally, I found that Empathy showed significant connections to all dimensions of reality evaluations in each final model. This result suggests the important role of Empathy in mediated experience. Further studies should be both interesting and necessary about the mental process of *empathy* in mediated experience, and how it has an influence on *reality sense*.

Which other factors influence our *reality sense* in mediated experiences?

Also, in this research, we explored the possible factors influencing reality evaluations in NMM. These factors included the personality trait Absorption, and immediate emotional responses (including two dimensions: Valence and Intensity) to NMM. Although there is considerable zero-order correlation between these factors and reality evaluations, such as

General Reality (GR), the regression analysis failed to find their direct influences on GR. They work through immediate mental processes, the *reality dimensions* to enhance our *reality sense*. EQS models helped us investigate the relations of these factors to reality evaluations. The present results partly supported our hypotheses about these factors' *indirect* effects. Absorption has positive relations with Perceptual Realism and Life Relevance, and immediate emotional responses affect mainly Perceptual Realism positively.

I have hypothesized that personality Absorption would correlate positively with Perceptual Realism, Life Relevance and Social Realism. The present results of EQS models support this hypothesis of Absorption only in the *low story structure* messages. In the *high story structure* messages, the *direct* positive relation occurred between Absorption and Perceptual Realism, and some *indirect* effects of Absorption, which is mediated by Empathy, were observed, too (see Figures 3.3-3.6). I assumed that low absorbers would be concerned more about the instrumental element of mediated messages, and would care more about whether these messages were useful or relevant to themselves. The present results suggested that these assumed positive paths from Absorption to Life Relevance and Social Realism were not always significant. These findings showed us more information about the distinction between the *high story structure* and *low story structure* messages. I discussed that the possible reason might be that, in the *high story structure* messages, Absorption had a highly positive correlation with Empathy, and the influence of Empathy on reality evaluations was strong. It is easy to understand that a high absorber would be more susceptible to empathizing with the characters in NMM, vicariously experiencing mental aspects of them in her/his imagination. This strong relationship between Absorption and Empathy may mediate the influences of Absorption on Life Relevance and Social Realism in the *high story structure* messages, because of the thorough and

strong impacts of Empathy on them. In the *low story structure* messages, when the predictive potential of Empathy decreased, the direct influences of Absorption on these dimensions (LR, SR) of *reality sense* were shown in EQS models.

I have hypothesized that the two dimensions of Emotional Responses (Valence and Intensity) would influence reality evaluation through the mediation of Perceptual Realism. This hypothesis also was supported partly by the present model results. The exclusive impacts of the two emotional dimensions on Perceptual Realism appeared only in the *high story structure* video material. The model paths showed that more complex relationship of Valence and Intensity had their influences on other *reality dimensions*, such as Life Relevance and Social Realism, for *the low story structure* video. Also, the final models showed that Intensity had a stronger impact (higher significant level) on Perceptual Realism in the *low story structure* video clip, but Valence did in the *high story structure* clip. I explained this result that, the Emotional Valence, whether the viewer has preference for some messages, always was linked to a clear story. Whether or not the viewer likes the certain *story* is important in reality evaluations. If a viewer doesn't like the story in a film, which is presented clearly to him/her in the *high story structure* messages, he/she would definitely not be involved in it. But in the *low story structure* messages, a viewer *creates* meanings from the presented messages, and the process of *creating* narrative meanings itself is part of the *involvement* experience, which is closely connected to Perceptual Realism. He/she may not like specific *low story structure* messages at all, and may feel *intensely* annoyed by it. But at the moment of feeling annoyed, he/she has been *involved* in it, otherwise, it is impossible for him/her to get that feeling. Thus, the Emotional Intensity is the more valid indicator for the *involvement* experience, and connects to Perceptual Realism.

<u>Limitations of the present research:</u>

There are several limitations that might influence my explanation of the results in the present research. The first one is the questionnaire development. As was suggested in the questionnaire development section, the quality of some items was not as good as I would have liked them. The statistical features of internal consistency and factor loading of some items didn't meet perfectly the standards of an excellent scale (see Table 1.2-1.11). These items occurred on scales and sub-scales to measure most of the variables in my research. If the reliability of these measurements could not be guaranteed, their predictive power would not be stable, and the explanatory potential of all model results would not be firm. However, satisfactory reliability of these scales showed in the similar results in both the pilot test and the main study. During the questionnaire development, I found that items on the Empathy scale and reality evaluations sub-scale Life Relevance mingled together, and items measuring General Reality didn't load on a unique component in factor analysis, but mixed with other items of measuring the *dimensions* of reality evaluations. Thus, these variables have high correlation with each other because of the methodology of their measurement techniques, rather than because of the theoretical relations behind those *factors*. So, we should be cautious in explaining the present results, and pay special attention to some factors, such as Empathy and Life Relevance. In future study, if we could design more carefully and develop better measurements, we would be better able to glance at the *truth* behind the subjective experiences in NMM.

Another problem concerns the theoretical implications of statistical techniques, regression analyses and SEM – EQS models. As we know, regression and EQS methods don't give us any cues about cause-effect relations, but do say something about predictors. Particularly, in the explanations of EQS models, I have emphasized that the *paths* in models suggested the

relations among those factors and possible predictors, instead of causal relations. For example, in the case of two types of Narrative Meaning measurements (NM-Q & NM-R), when the questionnaire measurement (NM-Q) was replaced with self-report ratings measurement (NM-R), some paths from Absorption and Emotional Responses (Valence and Intensity) to the *dimensions* of reality evaluations became significant. From the theoretical perspective, this does not indicate that there are different mental functions of Narrative Meaning behind RSE, but shows the different predictive potentials of measuring techniques. In fact, we found that these two measurements of Narrative Meaning assess different aspects of NM, so it is not surprising that the results were different. One asked viewers if they believed that they understood narrative meanings while the other asked what were the *abstract* and *integrative* narrative meanings that they understood about the film clip. Thus, because of different predictive potentials of different measurements, some *paths* in final models supported my hypotheses in this research, and other "paths" might vary with the measurement of *other factors*. I explained these *paths* as the *displacements* of the *true* influences of these *factors*. If I had hypothesized that Narrative Meaning would influence some factors in RSE, the actual results might fail to support this hypothesis because of the *weak* predictive potential of its measurement rather than problems with the theoretical formulation. This situation seems to be the basic explanatory difficulty of EQS models, pertinent to the essential divergence between methodology and science theory in psychology. The methodology, the EQS models in the present research can't provide full evidence for theoretical constructions.

<u>Contributions of the present research</u>:

I think that the present study basically fulfilled the purposes which I mentioned early in the introduction section. I want to study one of the central issues in media psychology – *reality sense*. There is a huge amount of research on this topic. However, I found that these studies mainly concerned *general* mediated messages, such as all information from TV or electric media, and focussed on children as their target of research. In the present research, I wanted to pay attention to more specific content – narrative mediated messages (NMM, not including non-fictional mediated messages, such as news and documentary films), and normal mature experienced viewers. The final results suggested that my experimental arrangement was basically successful, and the present research yielded meaningful findings similar to previous research.

First, I investigated the dimensions of *mediated reality* in viewers' subjective experiences. Following previous research, my present study found similar dimensions in viewers' reality evaluation: Perceptual Realism, Life Relevance, and Social Realism. This result follows several findings in this field. Potter (1988) had discussed that there were three dimensions in viewers' *mediated reality*: "magic window" (close to Factuality), "instruction" and "identity" (close to Life Relevance). Also, Huston, Fitch et al. (1993, 1995) argued that Factuality and Social Realism were two main dimensions of *reality* in mediated experiences. As in *presence* studies, which are currently popular, many researchers (Lombard, 1999, etc.) found that Perceptual Realism (or "involvement") played an important role in the *reality sense* of mediated world. As previous research, I employed the statistical method - factor analysis to investigate these dimensions. Many questionnaire items were developed to measure viewers' subjective experiences about *mediated reality*. Then, I analyzed these items with factor analysis. Similar dimensions to previous research showed in the final factor loadings: Perceptual Realism

(PR), Life Relevance (LR), Social Realism and Factuality (SR&F). Because I employed the NMM, the fictional films as experimental materials, Factuality did not appear as a separate dimension in the present final results. Basically, this result repeated previous findings, that *reality* in mediated experience is not a uni-dimensional concept, but contains multiple dimensions. These dimensions are consistent to those which scholars and researchers have found in previous research, such as Social Realism (SR), Life Relevance (LR), Perceptual Realism (PR). In the present research, both questionnaire development and the final main study confirm this result in factor analysis, that similar *dimensions* appeared in factor loading of those items about reality evaluations.

Second, in the present research, I tried to distinguish those main *dimensions* of reality evaluations from *other factors*. I defined the *dimension* as the *primary mental processes* behind the Reality Status Evaluations (RSE) system, and *other factor* as the mental functions enhancing these *dimensions*. If the influences of other factors can not be explained by these *dimensions*, I think that these factors are extremely important to reality evaluations, and may be candidates for other *dimensions* of reality evaluations. In the present research, I investigated two possible factors, Narrative Meaning and Empathy. I found their strong *direct* influences on reality evaluations differed in *low and high story structure* video clips. The NM's influence was significant in *low story structure* messages, and the impact of Empathy was significant in *high story structure* messages. I argued that understanding narrative meanings of mediated messages and empathizing with the main characters in the story were two crucial *mental processes* in mediated experiences, and they may therefore be independent *dimensions* of reality evaluations. I think that, it is because previous research did not distinguish high *or low story structure* mediated messages, researchers failed to detect the influences of Narrative Meaning and

Empathy. My present results showed that, only when I made the distinction between these two kinds of messages, the influences of these factors could be found in analysis results.

Also, I want to emphasize that there is relatively less previous research focusing on *narrative* in mediated experiences. But, I believe that the concept Narrative Meaning is extremely important for this field. A few previous studies had investigated *narrative* through the *story structure* of messages, finding that different *narrative structure* would help viewers' understanding mediated messages. I would like to argue that *narrative* means not only the objective *story* in mediated materials, but also the subjective process indicating the active understanding of the intentions of other human minds. Thus, I say that *narrative* is one of the *core* concepts relative to human communication, and definitely would connect closely to *reality sense* in mediated experiences. My present study is a good argument for further study of *narrative* in media psychology.

Third, I used the EQS as the tool for analysis in my present study, in addition to regression and factor analysis. There is relatively little previous research in this field employing this statistical technique (Valkenburg & Vandervoort, 1995). However, I found that reality evaluations were intricate subjective experiences, containing complex, multi-level mental processes. SEM – EQS should be a suitable statistical method to explore this topic. Although regression and factor analysis have often been used to investigate *reality* in mediated experiences, the present research shows the utility of SEM-EQS as a good alternative methodology in this field.

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Table 1.1

Video Clip Selection: Means and Standard Deviation of Self-report scores for All Videos:

	Video Clip	Reality	Truth	Involvement	Self-relevant	Narrative meaning	Empathy
		Mean(SD)					
1	Pandora (dream)	5.61 (1.88)	3.17 (1.47)	3.06 (1.83)	1.83 (1.20)	2.11 (1.02)	2.28 (1.23)
2	Airplane (POV shot)	12.94 (1.06)	5.94 (.73)	4.33 (1.46)	3.83 (1.76)	5.11 (1.78)	4.61 (1.65)
3	Triangle & circle (H*)	3.00 (1.03)	2.94 (1.95)	4.72 (1.90)	2.89 (2.32)	3.61 (2.20)	3.61 (2.15)
4	Popcorn	11.33 (2.20)	5.94 (.83)	4.78 (1.73)	3.17 (1.92)	4.11 (2.05)	2.71 (1.65)
5	Angel	7.61 (2.89)	4.56 (1.58)	3.56 (1.89)	3.33 (1.97)	3.11 (1.81)	3.44 (1.69)
6	Ice-car racing (POV shot)	12.78 (1.66)	6.17 (.92)	4.72 (1.71)	2.83 (1.69)	3.94 (2.13)	3.72 (1.90)
7	Triangle & circle (A**)	3.61 (2.38)	2.94 (2.01)	3.67 (1.85)	2.33 (1.88)	3.28 (2.24)	2.94 (1.89)
8	Cartoon	3.33 (1.97)	2.83 (1.95)	4.22 (1.77)	2.50 (1.95)	3.11 (1.94)	2.78 (1.80)

Note. N = 18   * H: happy music soundtrack; ** A: angry music soundtrack;

Table 2.1

Means and Standard Deviations for All Items:

	N	Minimum	Maximum	Mean	SD
General Reality					
GR1101	69	1.00	7.00	2.51	1.75
GR1301	69	1.00	7.00	2.65	1.51
GR1501	68	1.00	7.00	3.65	2.00
GR2501	68	1.00	6.00	2.74	1.47
GR3001	68	1.00	6.00	1.78	1.33
Factuality					
F501	69	1.00	7.00	3.77	1.78
F1401	68	1.00	7.00	3.12	1.48
F1601	68	1.00	7.00	3.40	1.70
Social Realism					
SR201	69	1.00	7.00	1.62	1.31
SR601	69	1.00	7.00	4.03	1.96
SR1201	69	1.00	7.00	2.88	1.72
Life Relevance					
LR1801	68	1.00	7.00	2.44	1.81
LR2301	68	1.00	5.00	1.38	.83
LR2601	68	1.00	7.00	2.68	1.86
Perceptual Realism					
PR101	68	1.00	7.00	2.74	1.68
PR401	69	1.00	7.00	2.54	1.63
PR1001	69	1.00	7.00	3.12	1.72
PR2101	68	1.00	6.00	2.76	1.65
PR2401	68	1.00	7.00	2.24	1.43
Empathy					
E801	69	1.00	7.00	3.01	1.91
E901	69	1.00	7.00	1.97	1.59
E2801	68	1.00	7.00	2.13	1.56
Narrative Meaning					
NM301	69	1.00	7.00	3.19	1.67
NM1901	68	1.00	7.00	3.84	2.12
NM2001	68	1.00	7.00	3.22	1.96
NM2201	68	1.00	7.00	3.28	2.09
NM2901	68	1.00	7.00	2.34	1.68
Media Awareness					
MA701	69	1.00	7.00	2.64	1.70
MA1701	68	1.00	7.00	5.01	1.78
MA2701	68	1.00	7.00	4.06	1.80
Valid N (listwise)	68				

Table 2.2

<u>Sub-scale - **General Reality**</u>: Correlate Matrix and Cronbach's Coefficient:

	GR1301	GR1501	GR2501	GR3001
GR1101	.433**	.207	.430**	.455**
GR1301		.534**	.566**	.436**
GR1501			.409**	.258*
GR2501				.528**

Cronbach's Alpha =.787   (N=5) p=.4256

(After deleting GR1501) Alpha = .783 (N=4) p=.4747

Note. N = 68
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 2.3

Sub-scale - **Factuality**: Correlate Matrix and Cronbach's Coefficient:

	F1401	F1601
F501	.274**	.586**
F1401		.419**
Cronbach's Alpha = .690 (N=3) p=.4263		

Note. N = 68
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 2.4

Sub-scale – **Social Realism**: Correlate Matrix and Cronbach's Coefficient:

	SR601	SR1201
SR201	.314**	.399**
SR601		.315**
Cronbach's Alpha = .610 (N=3) p=.3427		

Note. N = 68
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 2.5

<u>Sub-scale – **Life Relevance**: Correlate Matrix and Cronbach's Coefficient:</u>

	LR2301	LR2601
LR1801	.414**	.706**
LR2301		.499**
Cronbach's Alpha = .779   (N=3) p=.5397

Note. N = 68

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 2.6

Sub-scale - **Perceptual Realism**: Correlate Matrix and Cronbach's Coefficient:

	PR401	PR1001	PR2101	PR24001
PR101	.810**	.558**	.570**	.730**
PR401		.575**	.538**	.741**
PR1001			.477**	.542*
PR2101				.678**
Cronbach's Alpha = .892 (N=5) p=.6219			

Note. N = 68

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 2.7

Scale - **Empathy**: Correlate Matrix and Cronbach's Coefficient:

	E901	E2801
E801	.624**	.505**
E901		.491**
Cronbach's Alpha = .779 (N=4) p=.5400		

Note. N = 68
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 2.8

Scale **Narrative Meanings**: Correlate Matrix and Cronbach's Coefficient:

	NM1901	NM2001	NM2201	NM2901
NM301	.057	.546**	.539**	.557**
NM1901		.235	.166	.196
NM2001			.856**	.733**
NM2201				.739**

Cronbach's Alpha = .812   (N=5) p=.4624

(After deleting N1901) Alpha =.887 (N=4) p=.6617

Note. N = 68
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 2.9

Scale - **Media Awareness**: Correlate Matrix and Cronbach's Coefficient:

	MA1701	MA2701
MA701	-.087	.002
MA1701		.120
Cronbach's Alpha = .034 (N=3) p=.0117		

Note. N = 68
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 2.10

Factor Analysis: Rotated Component Matrix (all coefficients above .4 are highlighted.)

	Component						
	1	2	3	4	5	6	7
PR101	.481	.137	.438	.518	.283	.181	-.030
SR201	.674	.145	.419	.033	-.146	.081	-.103
NM301	.642	.274	.159	.055	.317	.035	-.041
PR401	.580	.238	.316	.360	.294	.143	-.042
F501	.100	.667	.140	.360	.156	-.101	-.047
SR601	.218	.698	.233	-.071	.368	.056	-.030
MA701	-.160	.102	.871	.087	.000	-.019	.093
E801	.575	.437	.358	-.030	.275	.142	.182
E901	.520	.142	.600	.152	-.004	.226	-.111
PR1001	.464	.231	.236	.116	.257	.457	.183
GR1101	.522	.166	.242	.333	.134	.151	.132
SR1201	.193	.367	.320	.601	-.151	.090	.268
GR1301	.509	.620	.123	.093	-.120	-.041	.086
F1401	.332	.449	.127	.191	-.085	-.245	-.364
GR1501	.080	.858	-.038	.000	-.025	.292	-.004
F1601	.293	.769	.024	.200	.134	.217	-.049
MA1701	.037	-.119	-.062	-.113	.165	-.875	.058
LR1801	.723	.343	.095	.064	.175	-.109	.113
NM1901	.168	-.045	.062	.118	.021	-.050	.896
NM2001	.801	.236	-.144	-.016	.144	.080	.181
PR2101	.461	.226	-.150	.561	.335	.260	-.069
N2201	.828	.216	-.229	-.098	.055	.032	.138
LR2301	.654	.003	.173	.168	-.159	.023	-.123
PR2401	.649	.092	.140	.522	.188	.175	-.011
GR2501	.471	.548	.044	.413	-.006	-.150	.040
LR2601	.754	.307	.000	.270	.103	-.044	.085
MA2701	.011	.113	-.023	.093	.833	-.127	.031
E2801	.738	.045	.173	.302	.034	-.063	-.061
NM2901	.868	.126	-.039	.210	.010	.025	.023
GR3001	.645	.230	-.078	.240	-.120	.020	.121
Eigenvalue	8.55	4.23	2.26	2.24	1.65	1.51	1.27
% of Variance	28.5	14.1	7.5	7.4	5.5	5.0	4.2

Note. N=69 Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 13 iterations.

Table 2.11

Factor Analysis: Rotated Component Matrix (all coefficients above .4 are highlighted.)

	Component			
	1	2	3	4
PR101	.194	**.835**	.212	.149
NM301	**.489**	**.439**	.225	.315
PR401	.345	**.689**	.289	.205
F501	.005	.281	**.687**	.213
SR601	.149	.145	**.650**	**.500**
E801	**.439**	**.426**	**.420**	.323
E901	.235	**.679**	.245	-.101
PR1001	.263	**.603**	.133	.290
GR1101	.327	**.593**	.240	.093
SR1201	.001	**.575**	**.509**	-.111
GR1301	**.431**	.224	**.651**	.019
F1401	.269	.091	**.621**	-.113
LR1801	**.650**	.296	.391	.183
NM2001	**.824**	.208	.153	.214
PR2101	.381	**.566**	.143	.299
NM2201	**.889**	.100	.145	.124
LR2301	**.514**	**.424**	.054	-.234
PR2401	**.433**	**.727**	.166	.076
SR2501	.398	.330	**.634**	.006
LR2601	**.673**	**.426**	.317	.078
MA2701	.015	.102	.018	**.811**
E2801	**.585**	**.508**	.163	-.071
NM2901	**.796**	**.411**	.149	-.032
GR3001	**.605**	.281	.279	-.092
Eigenvalue	5.54	5.19	3.33	1.61
% of Variance	23.1	21.6	13.9	6.7

Note. N=69 Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 8 iterations.

Table 3.1

Video Clip 1 (high narrative message):

Means and Standard Deviations for All Items and Measurements:

	N	Minimum	Maximum	Mean	SD
Emotional Responses					
VAL01	108	1.00	9.00	4.66	1.74
INTEN01	99	1.00	9.00	3.03	1.70
General Reality					
GR901	114	1.00	7.00	2.60	1.59
GR1101	114	1.00	7.00	2.60	1.39
GR1901	113	1.00	7.00	2.81	1.47
GR2401	114	1.00	6.00	2.13	1.31
Factuality & Social Realism					
F401	113	1.00	7.00	3.67	1.81
SR501	114	1.00	7.00	4.04	1.76
SR1001	114	1.00	7.00	3.06	1.40
Life Relevance					
LR1301	114	1.00	6.00	2.32	1.43
LR1701	114	1.00	7.00	1.75	1.18
LR2001	114	1.00	7.00	2.22	1.44
Perceptual Realism					
PR101	114	1.00	6.00	2.68	1.39
PR301	114	1.00	7.00	2.86	1.44
PR801	114	1.00	7.00	3.39	1.64
PR1501	114	1.00	7.00	3.37	1.77
PR1801	114	1.00	7.00	2.68	1.40
Empathy					
E601	114	1.00	7.00	3.02	1.65
E701	114	1.00	6.00	1.86	1.30
E2201	114	1.00	7.00	2.33	1.35
Narrative Meaning					
NM201	114	1.00	7.00	3.75	1.69
NM1401	114	1.00	7.00	3.16	1.77
NM1601	114	1.00	7.00	3.14	1.71
NM2301	114	1.00	7.00	2.53	1.58
Media Awareness					
MA2101	114	1.00	7.00	4.85	1.74
Valid N (listwise)	92				

Table 3.2

Video Clip 2 (low narrative messages):

Means and Standard Deviations for All Items and Measurements:

	N	Minimum	Maximum	Mean	SD
Emotional Responses					
VAL02	108	1.00	9.00	4.18	1.68
INTEN02	99	1.00	7.00	3.27	2.04
General Reality					
GR902	114	1.00	7.00	2.91	1.78
GR1102	114	1.00	7.00	2.66	1.54
GR1902	114	1.00	7.00	2.61	1.42
GR2402	114	1.00	7.00	2.26	1.42
Factuality & Social Realism					
F402	114	1.00	7.00	2.96	1.67
SR502	114	1.00	7.00	3.25	1.59
SR1002	113	1.00	7.00	2.65	1.49
Life Relevance					
LR1302	114	1.00	6.00	2.45	1.52
LR1702	114	1.00	7.00	1.76	1.17
LR2002	113	1.00	7.00	2.10	1.31
Perceptual Realism					
PR102	114	1.00	7.00	3.27	1.86
PR302	114	1.00	7.00	3.51	1.77
PR802	114	1.00	7.00	3.74	1.92
PR1502	114	1.00	7.00	3.60	1.87
PR1802	114	1.00	7.00	2.90	1.67
Empathy					
E602	114	1.00	7.00	2.70	1.65
E702	113	1.00	7.00	2.10	1.45
E2202	114	1.00	6.00	1.99	1.16
Narrative Meaning					
NM202	114	1.00	7.00	3.62	2.05
NM1402	114	1.00	7.00	2.46	1.61
NM1602	114	1.00	7.00	2.32	1.50
NM2302	114	1.00	7.00	2.47	1.69
Media Awareness					
MA2102	114	1.00	7.00	4.62	1.83
Valid N (listwise)	95				

Table 3.3

Factors of Reality Evaluation: Video Clip 1 (high narrative messages)
Rotated Component Matrix

	Component			
	1	2	3	4
PR101	.243	.672	.204	.116
NM201	-.025	.203	.392	.435
PR301	.134	.830	.072	.169
F401	.259	-.019	.030	.787
SR501	.209	.129	.135	.745
E601	.536	.425	.107	.410
E701	.605	.321	-.050	.110
PR801	.230	.790	.179	.155
GR901	.473	.471	.122	.072
SR1001	.266	.197	.180	.664
GR1101	.622	.215	.163	.387
LR1301	.646	.238	.273	.161
NM1401	.198	.118	.855	.226
PR1501	.257	.733	.214	.021
NM1601	.180	.219	.831	.086
LR1701	.623	.407	.051	.123
PR1801	.467	.510	.453	.117
GR1901	.603	.121	.103	.447
LR2001	.699	.061	.221	.148
E2201	.786	.174	.191	.221
NM2301	.490	.259	.629	.122
GR2401	.726	.247	.286	.199
Eigenvalue	4.98	3.67	2.66	2.64
% of Variance	22.6	16.7	12.1	12.0

Note. N=114 Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 8 iterations.

Table 3.4

<u>Factors of Reality Evaluation: Video Clip 1 (high narrative messages)</u>
<u>Rotated Component Matrix (Only "reality" sub-scales)</u>

	Component		
	1	2	3
PR101	.697	.270	.097
PR301	.835	.097	.173
F401	.021	.155	.851
SR501	.170	.138	.789
PR801	.822	.195	.168
GR901	.494	.429	.122
SR1001	.204	.336	.627
GR1101	.249	.628	.413
LR1301	.267	.726	.173
PR1501	.775	.231	.060
LR1701	.421	.601	.157
PR1801	.594	.544	.145
GR1901	.181	.533	.523
LR2001	.090	.761	.175
GR2401	.304	.757	.231
Eigenvalue	3.57	3.53	2.43
% of variance	23.8	23.5	16.2

Note. N=114 Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 6 iterations.

Table 3.5
T tests (Paired Samples) for All Scales and Measurements:

Measurement	Mean	SD	Corr.	t	df	p
Emotional Responses						
Valence						
Video 1.	4.66	1.70	-.047	1.770	99	.080
Video 2.	4.23	1.66				
Intensity						
Video 1.	3.02	1.70	.201	-2.412	96	.018
Video 2.	3.60	2.01				
General Reality						
Video 1.	2.51	1.10	.318	-.611	112	.542
Video 2.	2.59	1.26				
Factuality & Social realism						
Video 1.	3.57	1.34	.104	3.668	111	.000
Video 2.	2.96	1.29				
Life Relevance						
Video 1.	2.10	1.11	.363	.100	112	.920
Video 2.	2.09	1.11				
Perceptual Realism						
Video 1.	2.99	1.23	.406	-2.760	113	.007
Video 2.	3.40	1.61				
Empathy						
Video 1.	2.41	1.22	.360	1.146	112	.254
Video 2.	2.27	1.15				
Narrative meaning (items)						
Video 1.	2.94	1.48	.365	3.331	113	.001
Video 2.	2.41	1.49				
Narrative meaning (self-report)						
Video 1.	1.61	1.11	.531	1.790	111	.076
Video 2.	1.43	1.27				

Table 3.6

<u>Zero-order Correlates of "Reality Evaluations": for Video Clip 1 (High narrative messages):</u>

Variable	Absorption	E. V	E. I.	E	NM-Q
E. Valence	.087				
E. Intensity	.136	.262*			
Empathy	.229*	.346**	.338**		
Narrative (NM-Q)	.207*	.337**	.267**	.504**	
Narrative (NM-R)	.082	.112	.322**	.190*	.275*
Reality Scales					
General Reality	.233*	.348**	.358**	.795**	.556**
Perceptual Realism	.344**	.555**	.456**	.619**	.566**
Social Realism	.150	.220*	.099	.572**	.429**
Life Relevance	.239*	.280*	.259*	.733**	.545**

Table continued:

Variable	NM-R	GR	PR	SR
Reality Scales				
General Reality	.215*			
Perceptual Realism	.131	.648**		
Social Realism	.220*	.593**	.377*	
Life Relevance	.280*	.755**	.593**	.509**

Note. N = 114

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 3.7

Zero-order Correlates of "Reality Evaluations": for Video Clip 2 (Low narrative messages):

Variable	Absorption	E. V	E. I.	E	NM-Q
E. Valence	.114				
E. Intensity	.214*	.276**			
Empathy	.210*	.313**	.463**		
Narrative (NM-Q)	.229*	.385**	.322*	.676**	
Narrative (NM-R)	.124	.165	.183	.301*	.457**
Reality Scales					
General Reality	.241*	.402**	.438**	.731**	.775**
Perceptual Realism	.333**	.276**	.630**	.650**	.322**
Social Realism	.207*	.447**	.156	.513**	.453**
Life Relevance	.293**	.324**	.415**	.745**	.751**

Table continued:

Variable	NM-R	GR	PR	SR
Reality Scales				
General Reality	.304**			
Perceptual Realism	.286**	.722**		
Social Realism	.189*	.585**	.415**	
Life Relevance	.323**	.802**	.604**	.501**

Note. N = 114

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 3.8

Simultaneous Regression: Video Clip 1(high narrative messages)

Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.027	.193		-.140	.889
	F1	.057	.043	.093	1.340	.183
	PR1	.244	.061	.273	3.982	.000
	SR1	.177	.064	.209	2.779	.006
	LR1	.471	.073	.459	6.465	.000

Note. N = 114
Dependent Variable: GR1

Table 3.9

Simultaneous Regression: Video Clip 2 (low narrative messages)

Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.039	.169		-.230	.818
	F2	.017	.047	.022	.368	.713
	SR2	.172	.061	.184	2.817	.006
	LR2	.574	.073	.503	7.893	.000
	PR2	.260	.048	.330	5.434	.000

Note. N = 114
Dependent Variable: GR2

Table 3.10

Stepwise Regression: Video Clip 1 (high narrative messages)

Step		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.732	.159		4.605	.000
	LR1	.851	.073	.780	11.698	.000
2	(Constant)	.315	.179		1.763	.081
	LR1	.630	.086	.577	7.288	.000
	PR1	.287	.071	.322	4.064	.000
3	(Constant)	-.068	.199		-.341	.734
	LR1	.507	.088	.465	5.757	.000
	PR1	.266	.067	.298	3.991	.000
	F & SR1	.198	.056	.243	3.565	.001

Note. N = 114

Dependent Variable: GR1

Table 3.11

Stepwise Regression: Video Clip 2 (low narrative messages)

Step		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.635	.169		3.760	.000
	LIFER2	.928	.072	.803	12.870	.000
2	(Constant)	.502	.149		3.375	.001
	LR2	.550	.093	.476	5.930	.000
	NM-Q2	.378	.068	.444	5.541	.000
3	(Constant)	.250	.151		1.660	.100
	LR2	.441	.090	.382	4.919	.000
	NM-Q2	.286	.067	.336	4.271	.000
	PR2	.213	.053	.277	4.049	.000
4	(Constant)	.073	.164		.444	.658
	LR2	.378	.091	.327	4.139	.000
	NM-Q2	.255	.066	.300	3.833	.000
	PR2	.197	.052	.256	3.827	.000
	F & SR2	.147	.061	.155	2.427	.017

Note. N = 114
Dependent Variable: GR2

Table 3.12

EQS Model: Reality Evaluation (scale) – Video Clip 1 (high narrative messages)

V1=Absorption;   V2=Valence1;   V3=Intensity1;   V4=Perc-realism1;
V5=Reality1;   V6=Empathy1;   V7=Narrative1 (NM-Q); V8=Soc-realism1;
V9=Life-relevance1.

Equations:

$V4 = + *V1 + *V2 + *V3 + *V6 + *V7 + E4;$
$V5 = + *V4 + *V6 + *V8 + *V9 + E5;$
$V6 = + *V1 + *V3 + *V7 + E6;$
$V8 = + *V6 + E8;$
$V9 = + *V6 + *V7 + E9.$

Standardized Solution: (R-Squared)

Perc-realism1 = V4 = .142*V1 + .324*V2 + .202*V3 + .288*V6 + .251*V7 + .599 E4;   (.641)
Reality1 = V5 = .179*V4 + .517*V6 + .104*V8 + .226*V9 + .454 E5;   (.794)
Empathy1 = V6 = .147*V1 + .269*V3 + .391*V7 + .811 E6;   (.343)
Soc-realism1 = V8 = .601*V6 + .799 E8;   (.361)
Life-relevance1 = V9 = .638*V6 + .248*V7 + .612 E9.   (.626)

Goodness of Fit Summary:

Independence Model Chi-square = 443.500 (df = 36)

Chi-square = 13.152 (df = 15)   P. value = 0.59053

(The Normal Theory RLS Chi-square for this ML solution is 12.913)

Bentler-Bonett Normed Fit Index = 0.970

Bentler-Bonett Non-normed Fit Index = 1.011

Table 3.14

EQS Model: Reality Evaluation (Self-report) – Video Clip 1 (high narrative messages)

V1=Absorption;   V2=Valence1;   V3=Intensity1;   V4=Perc-realism1;
V5=Reality1;   V6=Empathy1;   V7= Soc-realism1;   V8= Life-relevance1;
V9=Narrative1 (NM-R).

Equations:

V4 = + *V1 + *V2 + *V3 + *V6 + E4;
V5 = + *V4 + *V6 + *V7 + *V8 + E5;
V6 = + *V1 + *V3 + *V9 + E6;
V8 = + *V6 + E8;
V9 = + *V6 + *V9 + E9.

Standardized Solution: (R-Squared)

Perc-realism1 = V4 = .166*V1 + .369*V2 + .220*V3 + .392*V6 + .645 E4;   (.584)
Reality1 = V5 = .188*V4 + .530*V6 + .114*V7 + .205*V8 + .450 E5;   (.798)
Empathy1 = V6 = .191*V1 + .279*V3 + .282*V9 + .850 E6;   (.277)
Soc-realism1 = V8 = .597*V6 + .802 E8;   (.356)
Life-relevance1 = V9 = .710*V6 + .136*V7 + .632 E9.   (.600)

Goodness of Fit Summary:

Independence Model Chi-square = 418.521 (df = 36)

Chi-square = 19.638 (df = 16)   P. value = 0.23697

(The Normal Theory RLS Chi-square for this ML solution is 19.015)

Bentler-Bonett Normed Fit Index = 0.953

Bentler-Bonett Non-normed Fit Index = 0.979

Table 3.15

EQS Model: Reality Evaluation (Self-report) – Video Clip 2 (low narrative messages)

V1=Absorption; V2=Valence02; V3=Intensity02; V4=Perc-realism2;
V5=Reality2; V6=Empathy2; V7=Life-relevance2 V8=Narrative2 (NM-R);
V9=Soc-realism2.

Equations:

V4 = + *V1 + *V2 + *V3 + *V6 +E4;
V5 = + *V4 + *V7 + *V9 + E5;
V6 = + *V1 + *V2 + *V3 + *V8 + E6;
V7 = + *V1 + *V2 + *V6 + E8;
V9 = + *V1 + *V2 + *V3 + *V6 + E9.

Standardized Solution: (R-Squared)

Perc-realism2 = V4 = .150*V1 + .152*V2 + .377*V3 + .387*V6 + .619 E4; (.617)
Reality2 = V5 = .344*V4 + .482*V7 + .209*V9 + .509 E5; (.741)
Empathy2 = V6 = .144*V1 + .276*V2 + .268*V3 + .198*V8 + .815 E6; (.336)
Life-relevance2 = V7 = .151*V1 + .131*V2 + .645*V6 + .647 E7; (.581)
Soc-realism2 = V9 = .184*V1 + .282*V2 - .187*V3 + .553*V6 + .704 E9. (.505)

Goodness of Fit Summary:

Independence Model Chi-square = 434.439 (df = 36)

Chi-square = 15.909 (df = 12) P. value = 0.19545

(The Normal Theory RLS Chi-square for this ML solution is 16.860)

Bentler-Bonett Normed Fit Index = 0.963

Bentler-Bonett Non-normed Fit Index = 0.971
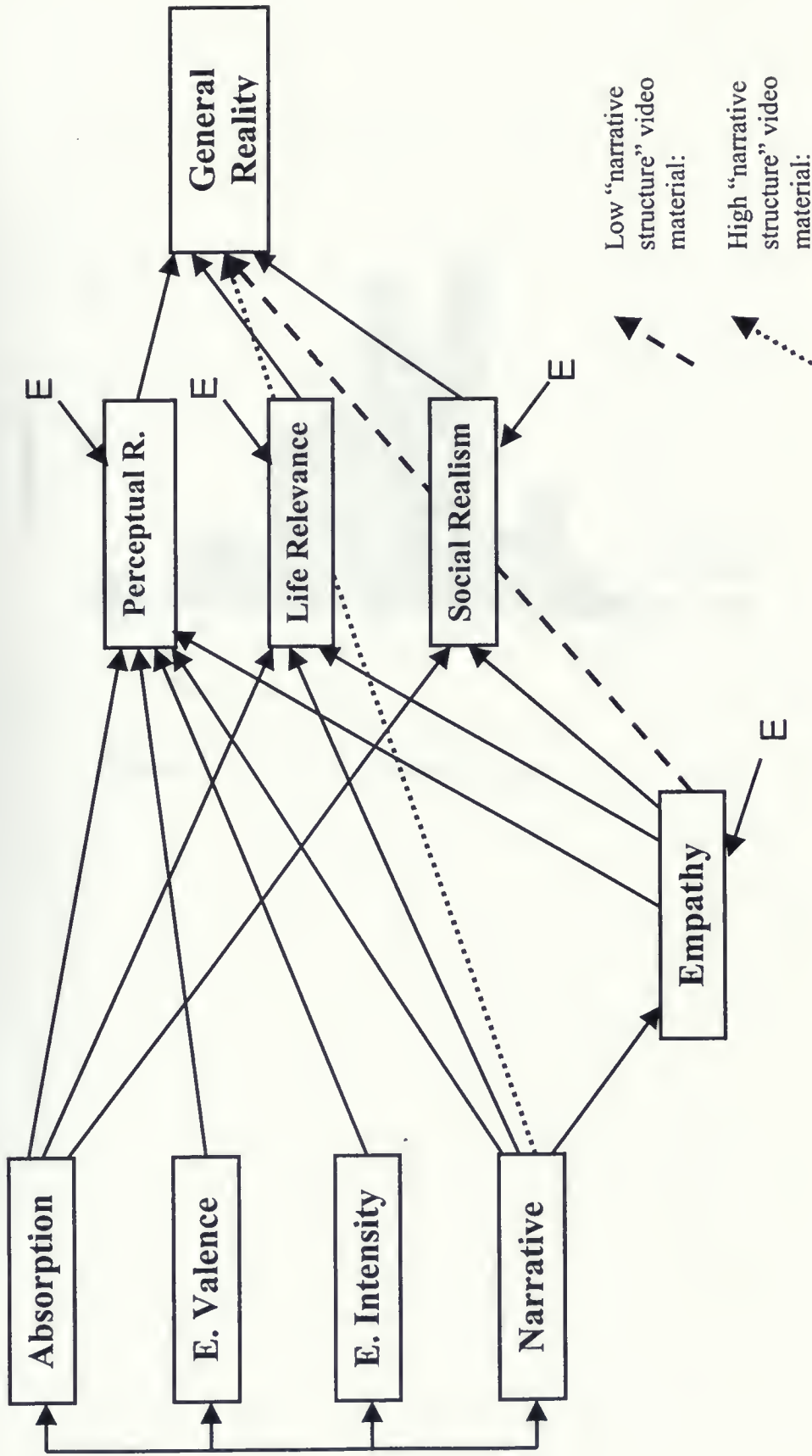
Figure 3.1 Model Hypothesis: Reality Status Evaluations in Narrative Mediated Messages
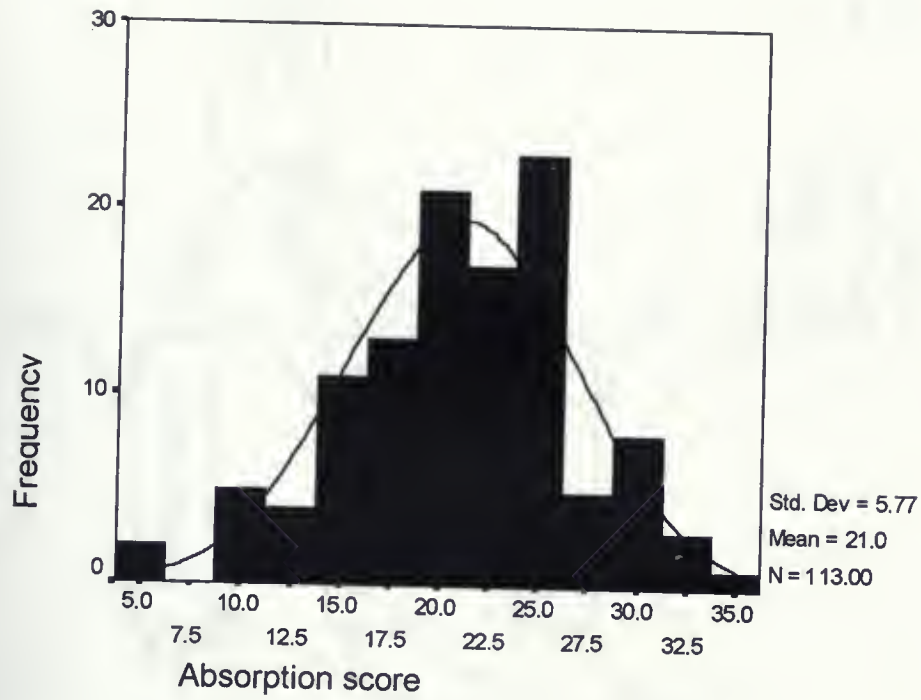
Figure 3.2 Absorption Distribution
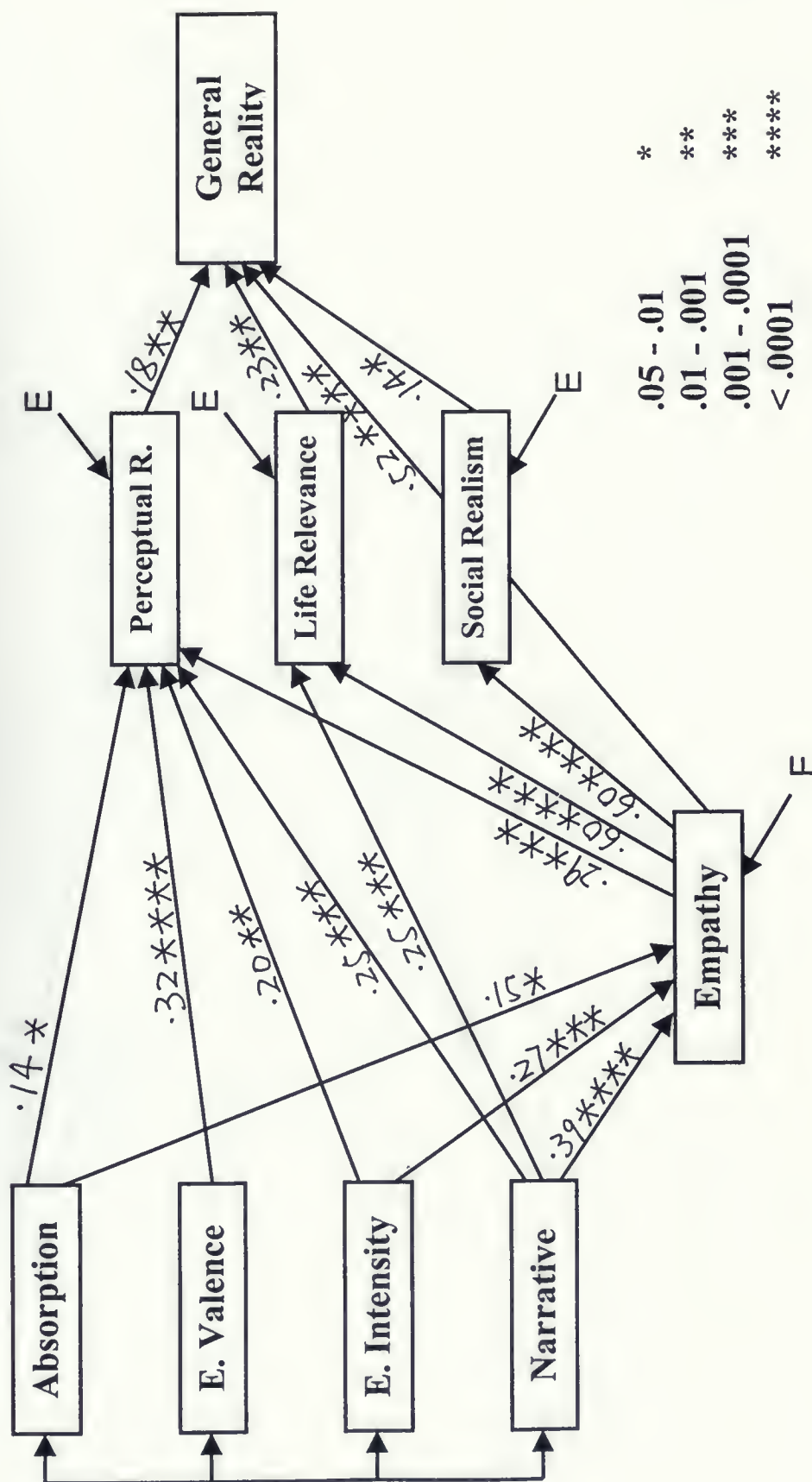
Figure 3.3 EQS Model: Reality Evaluation (scale) – Video Clip 1 (high narrative messages)
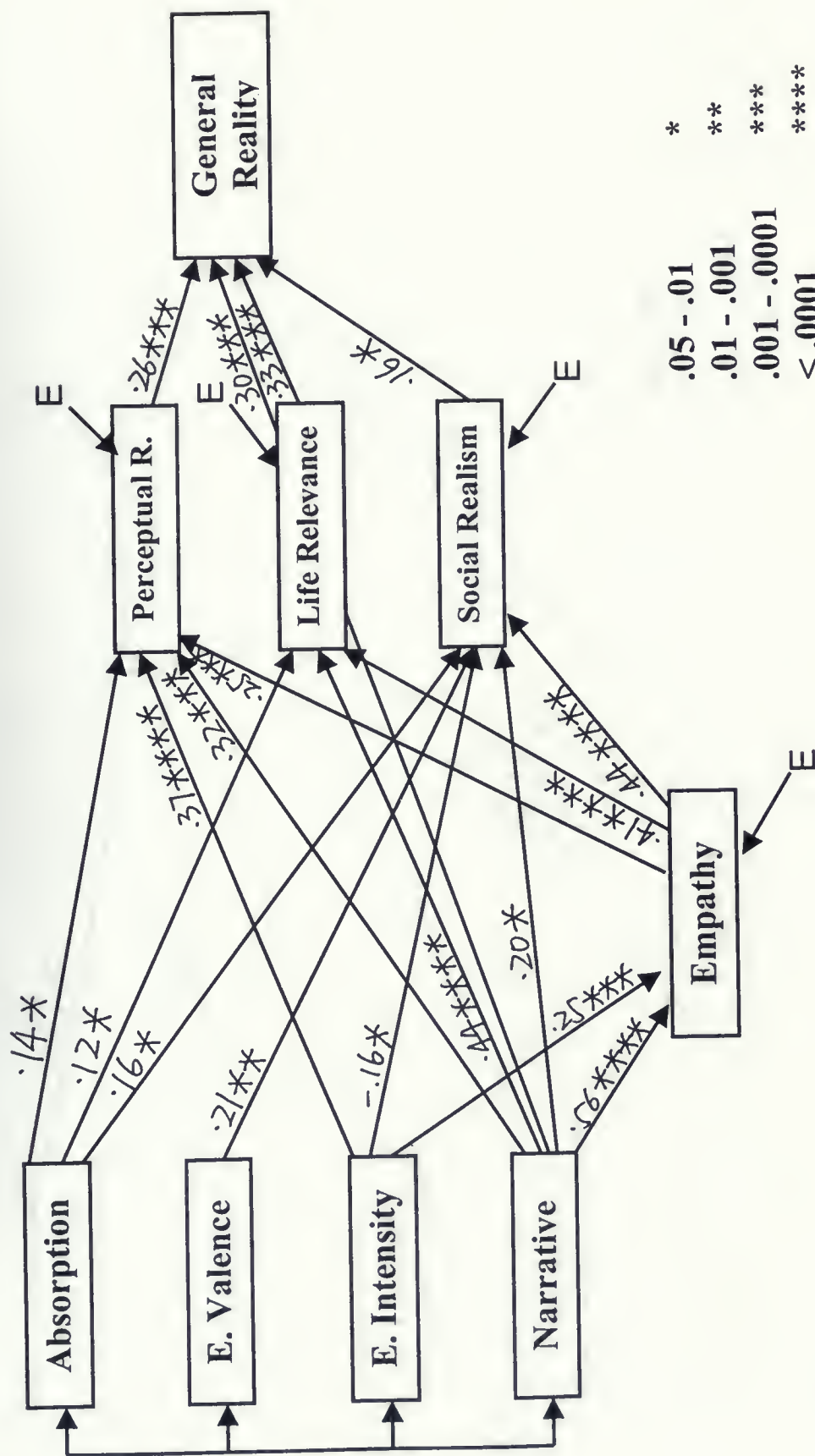
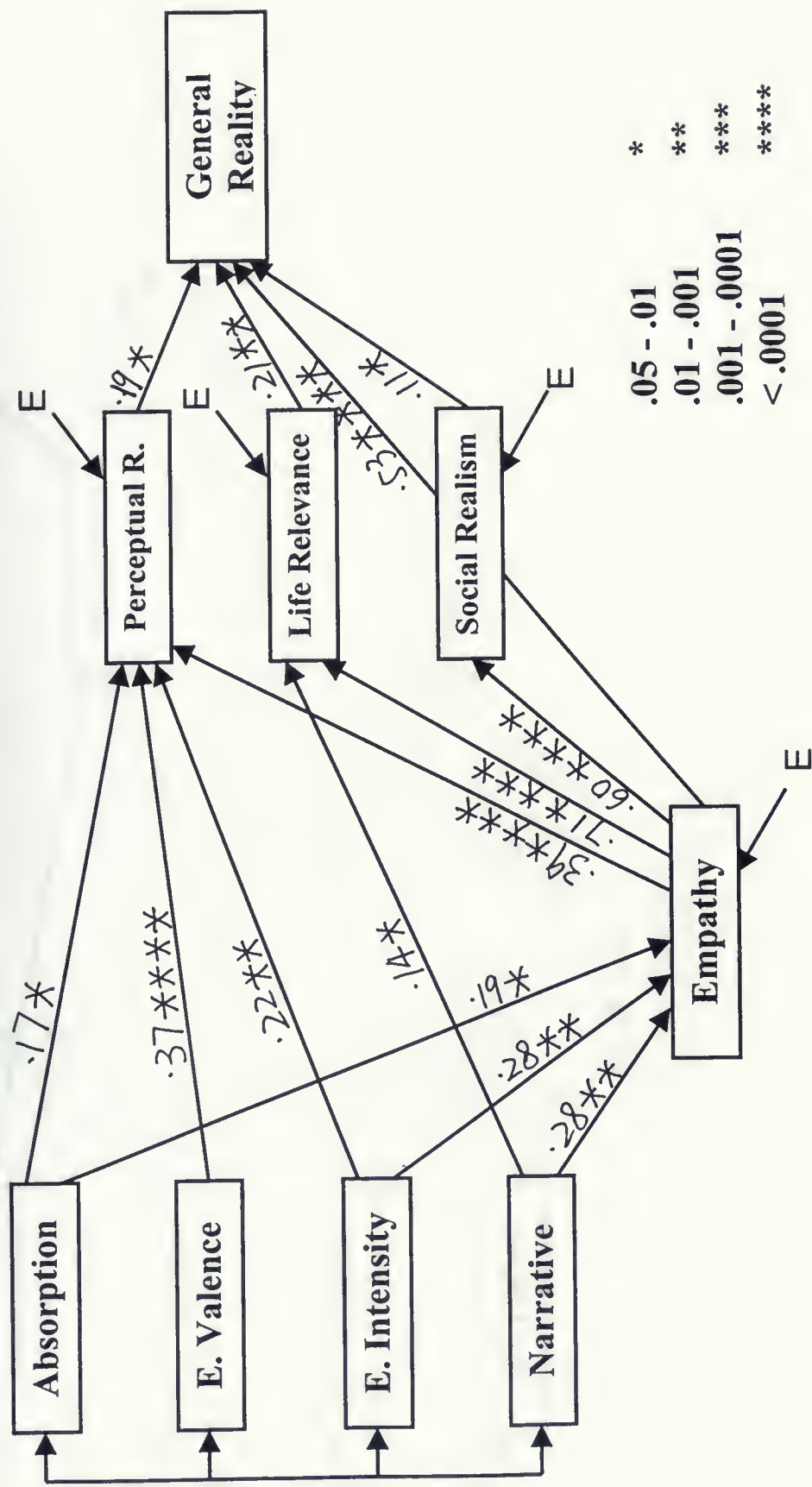**Figure 3.4** EQS Model: Reality Evaluation (scale) – Video Clip 2 (low narrative messages)

Figure 3.5 EQS Model: Reality Evaluation (Self-report)– Video Clip 1 (high narrative messages)
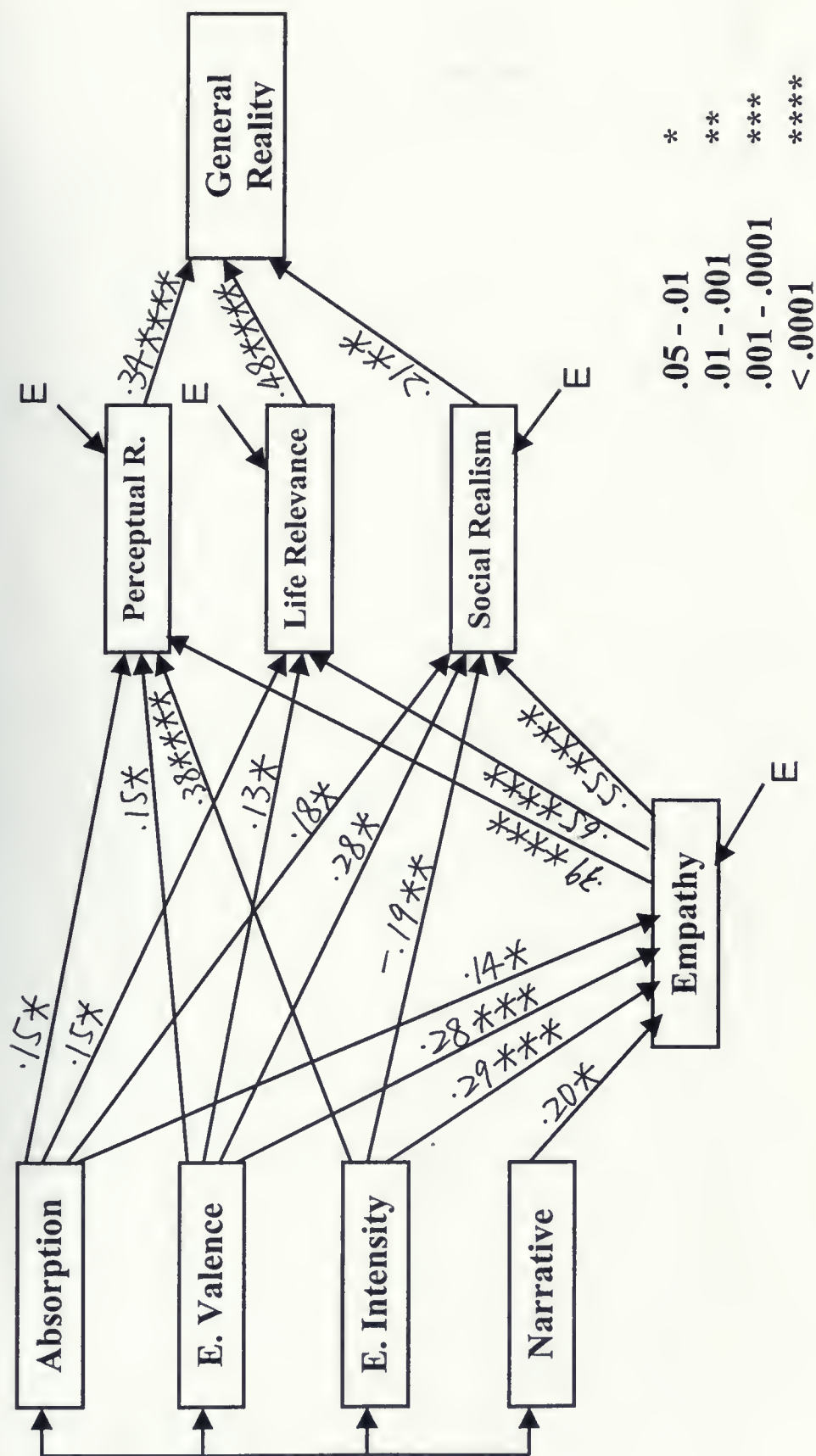
Figure 3.6 EQS Model: Reality Evaluation (Self-report) – Video Clip 2 (low narrative messages)

Appendix

Appendix 2: - Consent Form:

Brock University
Department of Psychology
(Informed Content Form)

Title of Study: **Reality Status Evaluation and Absorption In Mediated Experiences**

Researchers: Qian, Jian, Graduate student; Professor Joan Preston,

Name of Participant (Please print): _____

I understand that this study in which I have agreed to participate will involve viewing some video segments from common films and TV programs, which has been guaranteed no unsuitable content for collage-age students. I will also complete some questionnaires and verbal self-report about some subjective experiences immediately after viewing.

I understand that my participation in this study is voluntary and that I may withdraw from the study at any time and for any reason without pernalty.

I understand that there is no obligation to answer any question/participate in any aspect of this project that I consider invasive.

I understand that all personal data will be kept strictly confidential and all information will be coded so that my name is not associated with my answers. I understand that only the researchers named above will have access to the data.

Participant Signature:_____Date:_____

If you have any questions or concerns about your participation in the study, you can contact Qian Jian at Dept. Psychology, Brock University. Tel. 688-5550 ext. 3447.

Feedback about the use of the data will be avaible during the month of January, 2000 at Brock University, B227. A written explanation will be provided for your upon request.

Thank you for your help! Please take one copy of this form with you for further reference.

I have fully explained the procedures of this study to the above volunteer.

Researcher Signature:_____Date:_____

Appendix 3:   - Final Version of *Reality Status Evaluation Questionnaire*:

Please circle the responses that best represent your answers.

1. Do you easily become deeply involved in this video clip?

        Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

2. The visuals convey the meaning of the story in this video.

        Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Completely

3. To what extent did you feel mentally immersed in the media experience?

        Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

4. The events I saw/heard <u>could</u> actually occur in the real world.

        Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

5. Regardless of other aspects, the persons and events in this clip are authentic and believable.

        Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Totally

6. I can empathize with persons in this clip or experience the same feeling with them.

        Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

7. How much did you feel like the events you saw/heard were happening to you?

        Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

8. How completely were your senses engaged in the media experience?

        Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

9. The experience caused real feelings and emotions for me.

        Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

10. The way events occurred in this clip is analogous to the way they occur in the real world.

        Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

11. To what extent did you experience a sensation of reality?

        Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

12. The scenes in video displayed situations and persons that exist in space and time of the real world.

        Pure fantasy ☐ ☐ ☐ ☐ ☐ ☐ ☐ Not at all

13. How personally relevant was the content of the media experience to you?

        Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

14. I can fully understand the implications of the story expressed in this clip.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

15. During viewing, I felt immersed into the virtual or imaginary world created by the medium.
Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

16. I understood the meaning expressed in this video.
Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Yes

17. This video experience gave me information about how to behave in real life.
Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Yes

18. How emotionally involved were you in the mediated environment experience?
Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

19. How real did the content you saw/heard in this clip seem to you?
Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

20. The way some of the events I saw/heard occurred is similar to the way events have occurred in my own life.
Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

21. My attention was attracted by the production or display features of the video more than its content.
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

22. How much did you feel yourself closely identify with the characters in this story in media?
Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

23. This clip presented clear and meaningful messages for me.
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Yes for sure

24. How often did you feel that the media environment you saw/heard became reality for you?
Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

Appendix 4:   - Criteria for rating the meaning reports of film clips;

- The example of researchers' rating.

Case Elimination: the reports of these participants who responded in a careless or random fashion will be eliminated.

Level 0 – **no response**, e.g. left blanks; or "have no idea", "have no clue."

Level 1 – **simple descriptors**, simply repeating those events shown in clips: e.g. "a woman is doing laundry, then raise her baby." "a girl met a guy…"

Level 2 – **simple inferential meanings**, abstract concepts emerged, such as "about freedom." "peace vs. war", but there was no explanation.

Level 3 – **complex inferential meanings**, there are at least two aspects, or components of film meanings being mentioned in report. They were connected with each other and some explanation were shown.

Level 4 – **integrative meanings**, all contents shown in films were integrated as a whole…

#	Clip 1	Clip 2	#	Clip 1	Clip 2	#	Clip 1	Clip 2	#	Clip 1	Clip 2
1	2	0	36			73	0	0	108		0
2	0	0	37	0	0	74	2		109	1	
3	2	2	38		3	75	3		110	2	
4	3		39	2	2	76	3	3	111		4
5	2	0	40	1		78		0	112		4
6		0	41	2	0	79	2	0	114		1
7	2	2	42			80	2		115		
8	2	3	43	1	2	81	0	0	116	0	0
9	0	0	46	2		82	0	0	117	1	0
10			47		2	83	1		118	2	3
11	0	2	49		2	84			119	2	
12		1	50	0	0	85	3	4	120		
13			51			87	1	0	121	1	
14	2	0	52	2	1	88		2	122	2	2
15	0	0	53		2	89	2	0	123	2	2
16	0	0	54	3	3	90	2	2	127	1	0
17	0	0	57	3	3	91	0		128	2	0
18	4		58	0	0	92	0	1	129		
20	1	0	60	2		93	2		130	0	0
21		0	61	1	1	95	0	2	131	2	2
22		2	62		2	96		4	132	0	0
23	3	0	63	2	2	97	0	0	136		3
25	3		65	0	0	98	2	3	137		
26	2	1	66	2	2	99	2	3	138	0	0
27		4	67	1	1	101	1	0			
29			68		0	102	3				
32	0	0	69			103	3	3			
33		2	70		0	104		2			
34		3	71	2	2	105	3				
35	0	0	72	2	1	107	0	0			

Appendix 5: Measures used in Main Study:

- Absorption Questionnaire;
- SAM (Self-Assessment Manikin);
- Reality Status Evaluation Questionnaire.

Mediated Message Evaluation Scales

Please indicate:

Your gender:　　o male　　o female

Your age: _____

Below you will find a series of statements a person might use to describe his/her attitudes, opinions, interests, and other characteristics.

Each statement is followed by two choices - - True or False. Read the statement and decide which choice best describes you. Then make a cross on the T(rue) or F(alse) of those items.

Read each statement carefully, but don't spend too much time in deciding one single item. Please answer every statement, even it you are not completely sure of the answer.

T　F　　Sometimes I feel and experience things as I did when I was a child.

T　F　　I can be greatly moved by eloquent or poetic language.

T　F　　While watching a movie, a T.V. show, or a play, I may become so involved that I forget about myself and my surroundings and experience the story as if it were real　and as if I were taking part in it.

T　F　　If I stare at a picture and then look away from it, I can sometimes "see" an image of the picture, almost as if I were still looking at it.

T　F　　Sometimes I feel as if my mind could envelop the whole world.

T　F　　I like to watch cloud shapes change in the sky.

T　F　　If I wish I can imagine (or daydream) some things so vividly that they hold my attention as a good movie or story does.

T　F　　I think I really know what some people mean when they talk about mystical experiences.

T　F　　I sometimes "step outside" my usual self and experience an entirely different state of being.

T　F　　Textures -- such as wool, sand, wood -- sometimes remind me of colors or music.

T　F　　Sometimes I experience things as if they were doubly real.

T　F　　When I listen to music I can get so caught up in it that I don't notice anything else.

T /F　　If I wish I can imagine that my body is so heavy that I could not move it if I wanted to.

T F   I can often somehow sense the presence of another person before I actually see or hear her/him.

T F   The crackle and flames of wood fire stimulate my imagination.

T F   It is sometimes possible for me to be completely immersed in nature or in art and to feel as if my whole state of consciousness has somehow been temporarily altered.

T F   Different colors have distinctive and special meanings for me.

T F   I am able to wander off into my own thoughts while doing a routine task and actually forget that I am doing the task, and then find a few minutes later that I have completed it.

T F   I can sometimes recollect certain past experiences in my life with such clarity and vividness that it is like living them again or almost so.

T F   Things that might seem meaningless to others often make sense to me.

T F   While acting in a play I think I could really feel the emotions of the character and "become" her/him for the time being, forgetting both the audiences and myself.

T F   My thoughts often don't occur as words but as visual images.

T F   I often take delight in small things (like the five-pointed star shape that appears when you cut an apple cross the core or the colors in soap bubbles).

T F   When listening to organ music or other powerful music, I sometimes feel as if I am being lifted into the air.

T F   Sometimes I can change noise into music by the way I listen to it.

T F   Some of my most vivid memories are called up by scents and smells.

T F   Certain pieces of music remind me of pictures or changing color patterns.

T F   I often know what someone is going to say before he or she says it.

T F   I often have "physical memories"; for example, after I've been swimming I may still feel as if I'm in the water.

T F   The sound of a voice can be so fascinating to me that I can just go on listening to it.

T F   At times I somehow feel the presence of someone who is not physically there.

T F   Sometimes thoughts and images come to me without the slightest effort on my part.

T F   I find that different odors have different colors.

T F   I can be deeply moved by a sunset.

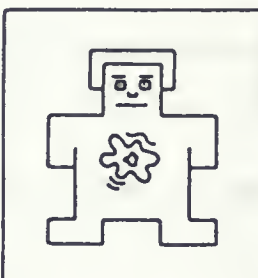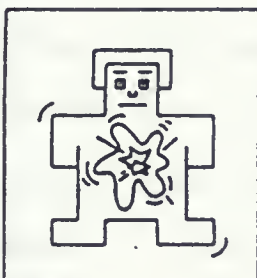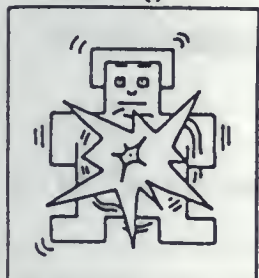## Wait. Please view video clip No. 1 .....

Video No. 1

Please use the figures below to indicate your emotions or how you felt during the media experience. The pictures go from a person who feels he or she is 1. HAPPY/PLEASED vs. UNHAPPY/ANNOYED, 2. EXCITING vs. CALM. Please put an "X" through the picture, or in the space between any two pictures, that best represents how you felt during the media experience.
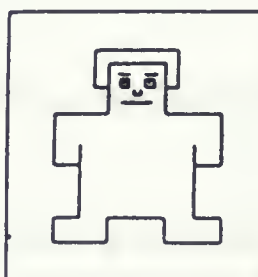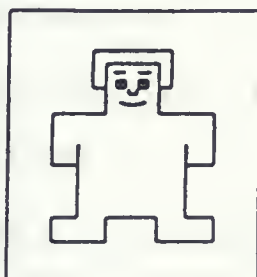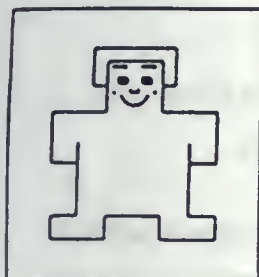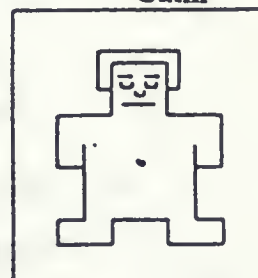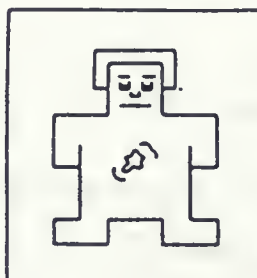
Happy/pleased   Unhappy/annoyed

Exciting   Calm

The questions on these pages ask about the media experience you just had. There are no right or wrong answers; Please skim these items quickly, just simply give your first impressions and answer to all of these questions as accurately as possible, even questions that may seem unusual or to not apply to the particular media experience you just had. Base your answer on your feeling rather than your knowledge about it.

Throughout the questionnaire, the phrases "environment" and "objects, events, or people" refer to the people and the events were presented in the video, not your immediate physical surroundings.

Please circle the responses that best represent your answers.

1. Do you easily become deeply involved in this video clip?

Not at all ☐   ☐   ☐   ☐   ☐   ☐   ☐ Very much

2. The visuals convey the meaning of the story in this video.

Not at all ☐   ☐   ☐   ☐   ☐   ☐   ☐ Completely

3. To what extent did you feel mentally immersed in the media experience?

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

4. The events I saw/heard <u>could</u> actually occur in the real world.

Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

5. Regardless of other aspects, the persons and events in this clip are authentic and believable.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Totally

6. I can empathize with persons in this clip or experience the same feeling with them.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

7. How much did you feel like the events you saw/heard were happening to you?

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

8. How completely were your senses engaged in the media experience?

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

9. The experience caused real feelings and emotions for me.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

10. The way events occurred in this clip is analogous to the way they occur in the real world.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

11. To what extent did you experience a sensation of reality?

Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

12. The scenes in video displayed situations and persons that exist in space and time of the real world.

Pure fantasy ☐ ☐ ☐ ☐ ☐ ☐ ☐ Not at all

13. How personally relevant was the content of the media experience to you?

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

14. I can fully understand the implications of the story expressed in this clip.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

15. During viewing, I felt immersed into the virtual or imaginary world created by the medium.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

16. I understood the meaning expressed in this video.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Yes

17. This video experience gave me information about how to behave in real life.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Yes

18. How emotionally involved were you in the mediated environment experience?

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

19. How real did the content you saw/heard in this clip seem to you?

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

20. The way some of the events I saw/heard occurred is similar to the way events have occurred in my own life.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

21. My attention was attracted by the production or display features of the video more than its content.

Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

22. How much did you feel yourself closely identify with the characters in this story in media?

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

23. This clip presented clear and meaningful messages for me.

Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Yes for sure

24. How often did you feel that the media environment you saw/heard became reality for you?

Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

Please write down briefly in a few words your understanding of the meanings of this video:

_____

_____

_____

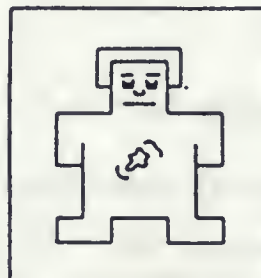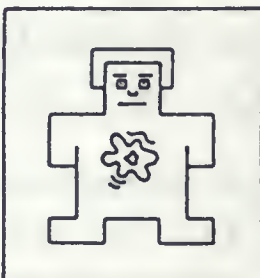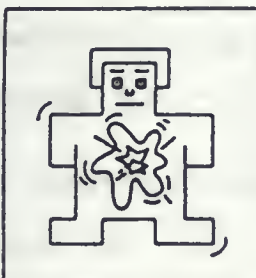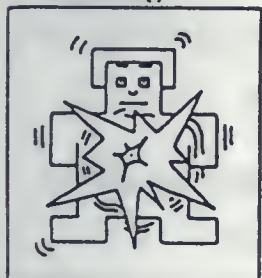## Wait. Please view video clip No. 2.....

Video No. 2

Please use the figures below to indicate your emotions or how you felt during the media experience. The pictures go from a person who feels he or she is <u>1. HAPPY/PLEASED vs. UNHAPPY/ANNOYED, 2. EXCITING vs. CALM</u>. Please put an "X" through the picture, or in the space between any two pictures, that best represents how you felt during the media experience.

Happy/pleased
Unhappy/annoyed
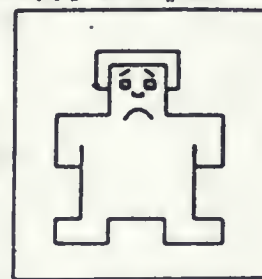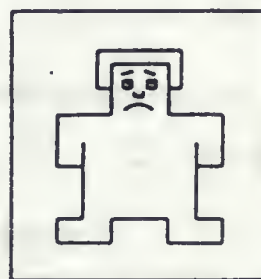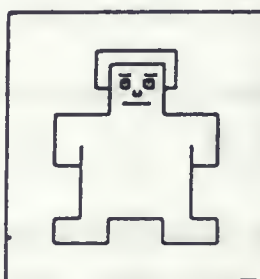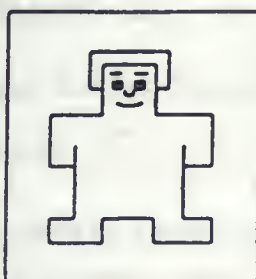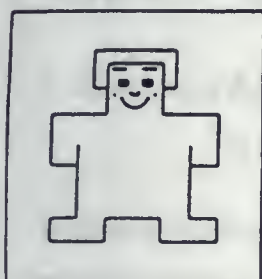
Exciting
Calm

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Please circle the responses that best represent your answers.

1. Do you easily become deeply involved in this video clip?

    Not at all ☐   ☐   ☐   ☐   ☐   ☐   ☐ Very much

2. The visuals convey the meaning of the story in this video.

    Not at all ☐   ☐   ☐   ☐   ☐   ☐   ☐ Completely

3. To what extent did you feel mentally immersed in the media experience?

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

4. The events I saw/heard <u>could</u> actually occur in the real world.

Never ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

5. Regardless of other aspects, the persons and events in this clip are authentic and believable.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Totally

6. I can empathize with persons in this clip or experience the same feeling with them.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

7. How much did you feel like the events you saw/heard were happening to you?

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

8. How completely were your senses engaged in the media experience?

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

9. The experience caused real feelings and emotions for me.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Always

10. The way events occurred in this clip is analogous to the way they occur in the real world.

Not at all ☐ ☐ ☐ ☐ ☐ ☐ ☐ Very much

11. To what extent did you experience a sensation of reality?

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12. The scenes in video displayed situations and persons that exist in space and time of the real world.

Pure fantasy ☐ ☐ ☐ ☐ ☐ ☐ ☐ Not at all

13. How personally relevant was the content of the media experience to you?

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16. I understood the meaning expressed in this video.

        Not at all ☐   ☐   ☐   ☐   ☐   ☐   ☐ Yes

17. This video experience gave me information about how to behave in real life.

        Not at all ☐   ☐   ☐   ☐   ☐   ☐   ☐ Yes

18. How emotionally involved were you in the mediated environment experience?

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19. How real did the content you saw/heard in this clip seem to you?

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20. The way some of the events I saw/heard occurred is similar to the way events have occurred in my own life.

        Not at all ☐   ☐   ☐   ☐   ☐   ☐   ☐ Very much

21. My attention was attracted by the production or display features of the video more than its content.

        Never ☐   ☐   ☐   ☐   ☐   ☐   ☐ Always

22. How much did you feel yourself closely identify with the characters in this story in media?

        Not at all ☐   ☐   ☐   ☐   ☐   ☐   ☐ Very much

23. This clip presented clear and meaningful messages for me.

        Never ☐   ☐   ☐   ☐   ☐   ☐   ☐ Yes for sure

24. How often did you feel that the media environment you saw/heard became reality for you?

        Never ☐   ☐   ☐   ☐   ☐   ☐   ☐ Always

Please write down briefly in a few words your understanding of the meanings of this video:

_____

_____

_____

Thank your participation!
Please return the questionnaire.