

VALUES IN ACTION (VIA) CLASSIFICATION OF STRENGTH

Chapter: 3.22. Humor

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[Note: the intended book is intended to be a classification of strength and virtues, just as the DSM is a classification of illness. This chapter describes one of the strength or virtues that the book discusses. For more on this project, see <http://psych.upenn.edu/seligman/taxonomy.htm>]

Humor represents a cognitive, emotional, and motivational stance toward incongruity, as inherent in funny artefacts, but also in inadvertently amusing situations, our fellows' behaviors and attitudes, in fate and life and human nature and existence in general. The playful reception, enjoyment and generation of non-serious communication, the composed and cheerful view on adversity that allows to derive a light and positive side in a serious situation, maintaining good mood and enabling oneself and others to smile at it and be amused by the funny aspect, the purposeful use of wit to affect emotional state in others and regulate social relations.

Individuals with this strength would strongly endorse such statements as:

- Whenever my friends are in a gloomy mood, I try to tease them out of it.
- I welcome the opportunity to brighten someone else's day with laughter.
- Most people would say I am fun to be with.
- I try to add some humor to whatever I do.
- I never allow a gloomy situation to take away my sense of humor.
- I can usually find something to laugh or joke about even in trying situations.

The use of "humor" as a chapter heading should not imply that one single homogeneous character strength would be presented. On the contrary, the present chapter will introduce a family of traits that represent meaningful but partially arbitrary and certainly not comprehensive marker variables in the under-investigated and not yet structured field of the "funny" (or comic, ridiculous).

The realm of this field is quite extensive covering a variety of phenomena that typically are seen affected by nature and culture to different degrees. While smiling and laughter are recognized as universal and innate expressions, the status of the emotion of amusement (or mirth, hilarity) is less clear and while it seems likely that all humans are capable of the perception that something is funny, the pertinent research is still missing. The process of civilization also brought a refinement in what a culture finds funny. For example, while in early writings laughter was only mentioned in connection with violent acts but also high spirits, word play and nonsense are relatively recent phenomena (Schmidt-Hidding, 1963). There is also an ontogenetic development and adults typically do not find jokes that make five year-olds laugh funny. "Funny" also means

”odd”, ”strange”, ”peculiar” or ”puzzling”, underscoring the fact that not all incongruity leads to laughter, and that we developed a mind set to perceive incongruity in a playful and amusing way.

While things might be perceived as funny without the intentional doing of a person we have also developed skills to purposefully generate a funny/comic effect, be it created on the spot or recounted. Even fellow humans may be the object of a funny consideration in as much as they may behave oddly, in a peculiar manner, or eccentrically, or their physical appearance deviates from expectations. Thus, the potential elicitors are numerous and diverse in a single culture and diversity increases if one considers different cultures. Cultures also differ as regards to whether the same occasion is an appropriate object for laughter or viewed from a ludicrous perspective.

Thus, a rich set of phenomena relating to humor has been accumulated in different cultures and words for their description have come into use. Different academic disciplines (e.g., anthropology, folklore) have collected occasions for laughter and lexicographers have indexed the words of the ”funny” in dictionaries. Despite the apparent diversity in phenomena and lexical descriptions, one can still postulate that the underlying principles of the elicitation of funniness and the mental and affective processes in their generation or perception are comparable across sets of phenomena and cultures. Hence it makes sense to search for the make-up of humor as a ubiquitous human strength. For a comprehensive account of humor as a trait one first needs agreement on the scope of the realm, then find an appropriate domain that reflects the field well, then sample the field comprehensively and finally extract the relevant dimensions describing humor best.

Historical Background and Definitions

There is not yet an agreed-upon terminology in research on humor, not to speak of a consensus on the definition of humor. Rather there are different and conflicting terminological systems and two should be mentioned at the outset as they assign different roles to the key term "humor". This historical nomenclature stems from the field of aesthetics where the funny — defined as the faculty of being able to make someone laugh or to amuse — is distinguished from other aesthetic qualities, such as beauty, harmony, or the tragic. In this tradition humor is simply one element of the funny — as are wit, fun, nonsense, sarcasm, ridicule, satire, or irony — and may be seen to denote a cognitive-affective style of dealing with situations and life in general that allows to derive a positive or light side in adverse and serious situations, to remain cheerful and composed, and even smile about them; i.e., at least find them marginally amusing. Humor can be contrasted from the other three major key terms in the field of the ludicrous as being based on a sympathetic heart, not on a superior spirit (like wit), moral sense or even haughtiness (like mock/ridicule), or vitality/high spirits (like fun) (Schmidt-Hidding, 1963). This understanding of humor still prevails in some cultures and this terminology is still cultivated in the respective scientific literature. However, while this view of humor has affected the writings of psychologists like Allport, Freud, Maslow, or Vaillant, it was not preserved by experimental psychology which rediscovered the study of humor in the 1970s (see anthologies by Goldstein & McGhee, 1972; Chapman & Foot, 1977) and were primarily concerned with the analysis of or reactions to jokes and cartoons. Also, to date no measure of individual differences in humor as a world-view exists.

The alternative, almost incompatible, current use of "humor" is its role as an umbrella term to all phenomena of the funny, including the capacity to perceive, interpret, and enjoy but also create and perform non-serious incongruous communications. Thus, in this terminology humor has replaced the comic/funny as the supreme term, and is treated as a neutral concept; i.e., not restricted to positive occasions for laughter. Several newer terms are used to distinguish among phenomena, but it would be wrong to speak of a fully-fledged terminological system. Regarding the key terms, "humor creation" now comes closest to "wit", "aggressive humor" resembles mock/ridicule, and "coping humor" is similar but not identical to "humor" in the traditional sense. While this understanding of "humor" seems to dominate in current Anglo-American research its new use as a collective term is not unproblematic. The positive connotation prevails and often psychologists have difficulty in treating humor as a neutral concept. This can be seen in the fact that humor inventories typically refer to positive occasions for laughter and lack items relating to the dark side of humor, e.g., a skillful and effective use of sarcastic remarks. Furthermore, research hypotheses almost exclusively relate humor to positive not negative phenomena.

What has led to this outcome? These differences in terminology are a product of cultural developments and it is surprising altogether that "humor", originally meaning liquid in Latin eventually became the supreme term. According to Schmidt-Hidding (1963) terms from the semantic field of the ludicrous entered the English language in five stages (with laughter, laugh being among the earliest and nonsense coming late in the 19th century), each stage molded by the spirit of the epoch. The meaning of the term "humor" has changed often and significantly throughout history and during different epochs it has been viewed as a predominant mood, talent, virtue, style, philosophical attitude or world view (see Ruch, 1998a; Schmidt-Hidding, 1963; Wickberg, 1998). It is necessary to briefly sketch the etymology of the term and development of the concept as those ideas prevail into modern times and most contemporary approaches to this strength either explicitly or implicitly build upon the historic meanings of humor of different stages.

The term humor has a long history, and, like wit (which had previously meant reason, mind, accumulated knowledge), the term did not enter the field of the comic/funny before the late 16th century. Earlier, umor meant liquid or fluid in Latin and, in medical language, humores was a term denoting body fluids. The mixture of the four humors in the make-up of a person was expressed in physical appearance, physiognomy, and proneness to disease. Optimally, the humours are balanced, but a predominance of blood, phlegm, yellow bile, or black bile yields, respectively, the sanguine, phlegmatic, choleric, and melancholic temperament. Pathologies of all kinds were explained by excess of the humors. As medical science progressed, humoral pathology was abandoned but the theory of temperaments— and the term humor — survived as an anthropological theory. One of the supplements to the theory was that a predominance of humors or body fluids was responsible for labile behavior or mood in general (1561 OED [Oxford English Dictionary]); so humour referred to a more or less predominant mood quality either positive (good humour) or negative (bad humour). Good humoured and bad humoured eventually became dispositions and by the turn of the 16th century the dictionary definition of good humour was 'the condition of being in a cheerful and amiable mood; also, the disposition or habit of amiable cheerfulness.' (Shorter Oxford English Dictionary, in 1616), clearly anticipating what we today would call an affect-based state-trait approach to humor.

In the 1680's throughout Europe the meaning of humour was expanded to include behavior deviating from social norms, or abnormality in general, and thus provided the basis for the term's entrance into the field of the comic via the object or target of laughter. A humour (later: a humourist) meant an odd, uncommon, and eccentric character whose peculiarities emerged from an imbalance of body fluids and who was subsequently laughed at, and the man of humour took pleasure in exposing and imitating the peculiarities of the humourist. Humor and wit became seen as talents relating to the ability to make others laugh. Note that the talent of humor still is not the sense of humor as it came to be understood later, as it may poke fun at the weaknesses of concrete persons and not portray human weaknesses in general in a benevolent way. This next shift was affected by humanism and was most significant, inasmuch as humour acquired its positive, versus formerly neutral, meaning (the frequent association of "good" and "humour" eventually made the neutral term humour into a positively loaded term). By the end of the 17th century, people had become weary of "put-down" witticisms. People should not be laughed at because of peculiarities of temperament, it was argued, since they were not responsible for them. Rather one should smile kindly at an imperfect world and human nature. Moralists tried to distinguish between "true" and "false" wit, as they did between "good" and "bad" humor. A term became necessary for the humanitarian, tolerant, and benevolent forms of laughter, and that term was found in good humour, later humour alone (Schmidt-Hidding 1963). During this epoch there was also a gradual shift in humor dispositions from sheer ability (a talent of ridicule, wit, or humor) to make others laugh to a virtue of sense of humor. While one should not poke fun at those who are simply different, it was permissible to laugh at the pompous, the unreal, the faked, the conceited, etc. Of course, even a serious person can hold attitudes and views, etc. which are ridiculous and one means of verifying their reasonableness is to expose oneself to a "test of ridicule" (as suggested by Shaftesbury, 1671–1713). Good humour denoted the sovereign attitude of exposing oneself to the criticism and mockery of others. Schmidt-Hidding notes this may have been the origin of the notion of the "sense of humor" although this expression was not yet in use. Later, many other elements were added, for example, the ability to laugh at one's misfortunes or at one's own expense.

At the beginning of the 19th century the conceptual distinction between wit and humour was completed. Wit referred to a cognitive ability and could be hurtful. Humor "comes from the heart" and is more benevolent. Humour received a philosophical twist, and a stronger character of a view on life or attitude. According to Schmidt-Hidding in the 19th century humour became a specific English cardinal virtue, joining others such as common sense, tolerance, compromise. In the second half of the 19th century the sense of humor was part of the English life style and a person lacking it was not considered complete. The political predominance of the British Empire spread the concept, and humor as a model life style extended beyond its boundaries. For those, who endorse the terminology in aesthetics as the only scientifically fruitful one, this was the end-point of the development of the term in the scientific literature; later writers only elaborated the concept but did not essentially change its meaning. However, the key terms and the associated concepts did not penetrate into all languages and cultures. Not surprisingly, the idea of humor as a virtue also appeared in American writings (Wickberg, 1998), while the term humor and the concept altogether did not gain much popularity in French, not to speak of non-western nations and languages. Also, even in the English speaking world the meaning of the humor-related terms

are subject to change, and due to the discontinuity of research interests in humor, a well-established terminology is bound to fade out.

Thus, current research has to cope with different uses and multiple meanings of the same term in one culture and with the fact that the key terms and the associated concepts may differ from culture to culture. While words as tools in communication have obvious shortcomings (e.g., meaning changes, ideographic understanding of terms) the study of the words of one language might be useful as a starting point. The extraction of a complete lexical corpus of humor-related terms allows us to map out the phenomena considered worthy of discussion in a comprehensive manner. Studying the interrelation of the terms—in particular when the words are used to rate humans—might help to uncover the descriptive dimensions underlying the field of humor. Such lexical and psycholexical studies exist albeit in a small-scale pilot form. Based on the study of the frequency and meaning of English terms from the semantic field of the ludicrous/funny (Thorndike English Dictionary) the linguist Schmidt-Hidding (1963) identified four key words in the semantic field of the ludicrous: humor, wit, mock/ridicule, and fun, and placed 38 other frequent words relative to the key words in an intuitive two-dimensional model. Humor—in the traditional sense—and mock/ridicule were opposing poles of one axis. Fun and wit are other markers but not seen in opposition (although the former relates to high spirits/vitality and the latter to the mind). Highly similar two-dimensional spaces also resulted from a pilot study in a psycho-lexical project and the analyses of comic styles (Ruch, 2001). A factor analysis of eight comic styles yielded two dimensions representing more benevolent ("laughing with") and skeptical ("laughing at") comic styles. Interestingly, the eight styles were arranged in the same order (i.e., fun, humor, nonsense, wit, irony, satire, cynicism, sarcasm) around the circumference as in Schmidt-Hidding's model albeit forming an arc of about 110° only. Rotating the axes by 45° yielded a coordinate system that separates the cognitive from the affective/motivational elements. Similarly, a factor analysis of a comprehensive list of German type nouns (e.g., joker, wit, cynic) related to humor and humorlessness resulted in a two-dimensional space with an almost complete circumplex arrangement. Again, one possible position of the axes separated affective (good vs. bad humoredness) from mental (sensibleness vs. nonsense) elements.

While systematic multilingual and multicultural psycholexical studies are still missing one can conclude so far that the field of the comic/funny terms is at least twodimensional. A parsimonious starting model would be to speak of a unitary ability to put things into a funny context (i.e., wit, or humor in the broader sense), which might be under control of different motivations and this explains the variety of humor styles (e.g., cynicism, irony vs. benevolent fun, or humor in the traditional sense). In other words, the capacity for perceiving incongruity and creating a funny effect might be blended with both benevolence and malevolence; i.e., it may serve to portray human weaknesses in general in an accepting way or to poke fun at the weaknesses of a particular person. As a psychological strength, humor might be most strongly related to this cognitive dimension. As a virtue one will have to consider the motivational dimension as well. On the surface it seems obvious in what forms of humor positive psychology ought to be interested in. Humor skills blended with the "appropriate" goals and motivations can make humorous acts even virtuous—as the sense of humor was seen as a virtue in Great Britain and USA in the 19th century (Schmidt-Hidding, 1963; Wickberg, 1998). At a societal level, however, cynics and satirists play an important role and it has been repeatedly argued that so called aggressive humor has a positive function too, namely to correct and repel deviations, make

wrong developments the butt of jokes, and keep the group together and give societal developments the right direction. Thus, it makes sense to study humor in all its complexity. Furthermore, lexical and psycho-lexical approaches may only help to initially structure the field of the funny. The next and more relevant step needs to be the identification of the relevant underlying dimensions of humor as an individual differences characteristic. Also, using other sources to structure the field might yield to more and/or different dimensions.

Contemporary Approaches

Currently humor is studied in many disciplines, such as linguistics, psychology, sociology, philosophy, anthropology, neuropsychology, gender studies etc. One approach is to study the humorous products; for example, linguists study humorous works, be it in the form of jokes or longer humorous texts (e.g., Attardo, 2001; Raskin, 1985). The other major approach involves the individual, but also group or nation that appreciates, generates or otherwise displays humor.

Besides the causes and the consequences of humorous behavior and experience, during the past 20 years also the study individual differences in humor (i.e., humor-related characteristics that people possess to varying degrees) are receiving attention again. These approaches vary with respect to factors like whether they aim to isolate single dimensions vs. attempts at comprehensive approaches, whether they study the individual's relation (creation or appreciation) to humorous material vs. humor behavior in everyday life, whether they see humor as a unipolar construct vs. a bipolar trait (i.e., that also incorporates forms of humorlessness, or less desirable humor behavior), but also how strong vs. weak is their link to humor theory. In fact, the recent renaissance of research interest in the sense of humor first brought a flood of instruments and studies aimed to link the trait with desirable outcomes, while the importance of working on appropriate conceptual frameworks (Craik & Ware, 1998), or measurement issues (Ruch, 1996) were only highlighted later. Still, the current approaches provide a good initial orientation in this domain whether or not they will be supplemented or replaced by future work.

Martin and coworkers (Kuiper, Martin, & Olinger, 1993; Martin, 1996; Martin & Lefcourt, 1983) offered two single unipolar individual differences measures for the study of humor that – although not being the first inventories in the field of self-reports – can be considered historical because this line of inquiry most consequentially pushed forward the importance of studying the sense of humor as a genuine personality trait and due to their frequent use a lot of research relating to beneficial outcomes of humor accumulated around those measures. The first approach defines the sense of humor as the ‘frequency with which a person smiles, laughs, and otherwise displays mirth in a variety of life situations’, and the scale is accordingly called the Situational Humor Response Questionnaire (SHRQ). The atheoretical and behavioral approach was deliberately chosen to avoid the theoretical debates over the processes involved in humor. Rather they trusted in overt mirthful behaviors sampled across both pleasant and unpleasant situations (ranging from specific and structured to general and unstructured, and from relatively common to relatively unusual) to be valid indicators of the “...more private and elusive processes that are involved in perceiving, creating, and enjoying humor in daily life” (Martin, 1996). While the SHRQ is orthogonal to adversity, the Coping Humor Scale (CHS) specifically assesses the degree to which subjects report using humor to cope with stress. The authors coined the term “coping humor” and this concept builds upon Freud’s view of humor as a mature defense

mechanism, except that it assumes a more deliberate and conscious choice to use humor to deal with stressful situations rather than unconscious processes. Both scales have been fruitful tools in research on humor as a stress moderator. They also have been influential in inspiring authors to put forward a variety of scales with different item contents and a slightly different concept but not entirely different approaches, or a more explicit model (for reviews of approaches or scales, see Martin, 1998, 2001; Ruch, 1998b).

Recently, Martin (Martin, Puhlik-Doris, Larsen, Gray, & Weir, in submission) revised his approach and conceptualized interpersonal and intrapsychic functions of humor in everyday life from a social functionalist perspective (Martin, Puhlik-Doris, Larsen, Gray, & Weir, in submission). According to this approach four general functions of humor emerge by crossing two distinctions, namely whether humor is used to enhance the self versus one's relationships with others, and whether the humor is relatively benign and benevolent versus potentially detrimental or injurious. In detail, Self-enhancing humor is seen as benign agentic humor involving, for example, humor as a means of coping with stress, perspective-taking humor, or humor as a defense mechanism. Aggressive humor refers to humor used to enhance the self at the expense of one's relationships, as seen, for example, in ridicule, sarcasm, mockery, or manipulative or coercive uses of humor. Affiliative humor is benign communal humor such as telling jokes, engaging in witty repartee, or otherwise amusing others as a means of promoting social cohesion, morale, and attraction, and reducing conflicts and tension. Finally, Self-defeating humor is humor used to enhance relationships with others at the expense or detriment of oneself, such as excessively self-disparaging humor, or humor as avoidance or denial.

The Humor Styles Questionnaire (HSQ) is aimed at measuring those four styles and was constructed using a sequential construct-based approach using several fairly large samples of participants with a broad age range. Factor analysis was used to reduce items and to arrive at largely orthogonal dimensions. While the Self-enhancing and Affiliative humor scales correlate significantly and fairly strongly with the SHRQ and CHS, the Aggressive and Self-defeating scales seem to assess dimensions that are not tapped by these measures. In addition, in a first study involving several samples the two measures of "benign" styles of humor are generally positively related to indicators of psychological health and well-being, and negatively related to negative moods. In contrast, the two measures of "detrimental" uses of humor are positively correlated with measures of poor psychological functioning, and negatively related with measures like self-esteem or social support. This suggests that psychosocial well-being may be related as much to the absence of certain deleterious forms of humor as to the presence of more beneficial forms of humor.

Craik and collaborators (Craik, Lampert, & Nelson, 1996; Craik & Ware, 1998) are representative for their attempt at pursuing both a comprehensive and a theory-guided approach to humor. They emphasize the importance of a community-oriented analysis of personality and humor and argue that during their lives people obtain a reputation in the social network they live in. Other members of the community can be tested and inform about it in a standardized manner, for example, by using the Humorous Behavior Q-sort Deck (HBQD), an assessment tool intended to give a comprehensive portrait of a person's style of humor. The measurement approach underlying the HBQD is characterized by three elements: (a) the attempt to cover the whole behavioral domain of everyday humorous conduct as comprehensively as possible rather

than formulating partly redundant items for the assessment of a few selected traits or components of humor; (b) the focus on the assessment of humor-related behaviors or behavior tendencies and, when aggregated, styles of humorous conduct; and (c) the application of the Q-sort technique to the assessment of humor rather than using conventional scales.

The set of 100 non-redundant statements were generated from a survey of the theoretical and empirical psychological research literature on humor and from observations of everyday social life. Based on principal components analysis of self-descriptive HBQD portraits by 456 university students in the United States they arrive at a tentative, and yet unreplicated, set of five bipolar humor styles. The Socially Warm versus Cold Humorous Style, at its positive pole, reflects a tendency to use humor to promote good will and social interaction, and, at its negative pole, an avoidance or aloofness regarding mirthful behavior. The Reflective versus Boorish Humorous Style describes a knack for discerning the spontaneous humor found in the doings of oneself and other persons and in everyday occurrences, at the positive pole, and an un insightful, insensitive and competitive use of humor, at the negative pole. The Competent versus Inept Humorous Style suggests an active wit and capacity to convey humorous anecdotes effectively, at its positive pole, and a lack of skill and confidence in dealing with humor, at the negative pole. The Earthy versus Repressed Humorous Style captures a raucous delight in joking about taboo topics, at the positive pole, and an inhibition regarding macabre, sexual, and scatological modes of humor, at the negative pole. Finally, the Benign versus Mean-spirited Humorous Style, at its positive pole, points to pleasure in humor-related activities that are mentally stimulating and innocuous and, at its negative pole, focuses on the dark side of humor, in its use to attack and belittle others. Craik et al. (1996) show that the "sense of humor" (as reflected by the participants' use of the quotidian term—not a term stemming from a theory, or an expert's view) primarily covers two styles, the socially warm and the competent humorous styles. Craik and Ware (1998) demonstrate the usefulness of the tool for the analysis of the humor style of comedians.

Ruch and colleagues (Ruch & Köhler, 1998, 1999; Ruch, Köhler, & vanThriel, 1996) approach humor from a temperamental perspective. They take the position that that while the expression of humor may be culture specific and may differ over time, the affective and mental foundations of humor will more likely be universal. Considering that humor is not unidimensional, unipolar and covers affective and mental factors (the dispositions need to relate to moods/temperaments and frame of mind) they postulate that cheerfulness, seriousness, and bad mood are traits forming the temperamental basis of humor. For each trait a facet model consisting of five to six facets was generated and served as a basis for the construction of an assessment instrument (STCI-T; Ruch et al, 1996). For example, trait cheerfulness (or the disposition for being in good humor) was considered to be composed of a prevalence of cheerful mood, low threshold for smiling and laughter, composed view of adverse life circumstances, responsiveness to a broad range of elicitors of amusement and smiling/laughter, generally cheerful/humorous interaction style. As such cheerfulness is the exemplification of the disposition for "being in good humor." (and bad mood—composed of melancholy and grumpiness—represent the disposition for "being in bad humor").

Subsequent experimental research confirmed that trait cheerfulness does indeed predict affect based humor behaviors, like amount of amusement and laughter in funny situations or keeping

humor under adversity, while trait seriousness can be seen as a variable globally underlying the mental processes involved in both humor creation and appreciation (Ruch, 1997; Ruch & Köhler, 1998, 1999). Moreover, joint factor analysis confirmed that all available sense of humor scales and the facets of cheerfulness merged in a potent first factor (comprising elements such as, a prevalent cheerful mood, the tendency to smile or laugh and to be merry, coping humor and cheerful composedness, humor under stress, laughing at yourself, initiating humor/liking to entertaining others, enjoyment of humor, verbal humor, finding humor in everyday life). Some humor scales—the ones involving mentality or attitudes—additionally loaded negatively on a second factor of seriousness (Köhler & Ruch, 1996; Ruch & Carrell, 1998). While seriousness is conceptually unipolar, it turned out to be negatively related to playfulness and need for play (Ruch & Carrell, 1998; Ruch & Köhler, 1998) and it might be better to expand it to a bipolar dimension.

Wit—or humor creation—refers to the ability to perceive the incongruous and to express it in quick, sharp, spontaneous, often sarcastic remarks that delight or entertain—either in social interactions or in verbal or graphical communications. This ability to create a comical or funny effect has to be distinguished from sheer reproduction of memorized humor, and also the talent to perform humorously. Yet, according to Feingold and Mazzella (1991) individual differences in wittiness cannot be explained only by the person's ability to create humor, but also needs to incorporate the degree to which the person is motivated to be funny and is able to communicate the humor effectively. Hence the authors' multidimensional model of wittiness hypothesizes three dimensions of wittiness: humor motivation, humor cognition, and humor communication. The authors also distinguish between two types of verbal humor ability, namely the memory for humor (measured by tests of humor information and joke knowledge) and humor cognition (tests of humor reasoning and joke comprehension). This talent of wit has been less well investigated (O'Quin & Derks, 1997) and despite the fact that questionnaire measurements exist wit is most often acknowledged as an ability (i.e., maximal behavior) best investigated by a performance test. In tests of producing captions for caption-removed cartoons a quantity (fluency) and quality (origence) component can be distinguished that—like with creative behaviors in other domains—show a medium sized correlation and different correlational pattern with predictors (Köhler & Ruch, 1996). Wit is sometimes said to be more hostile but there is no conclusive empirical evidence yet that spontaneously created funny remarks are necessarily aggressive, and never benevolent. It is as likely, that the ability to create humor is orthogonal to motivational aspects; i.e., it might be used in constructive or destructive ways.

Finally, there is a long lasting tradition to conceptualize humor as an aesthetic appreciation. A great variety of humor materials exist (jokes, cartoons, films, short stories, stage plays etc) and individuals differ in perceived funniness. Being most economic, jokes and cartoons have been used most often in research and there is some evidence that the stimulus characteristics generalize. Humor theories suggest that both content and structure have to be distinguished as two different sources of pleasure in humor, and factor analytic studies confirm that both are also pivotal in producing individual differences. Ruch (Ruch, 1992; Ruch & Hehl, 1998) introduced a two-mode model of humor appreciation that combines three basic factors of humor stimuli with two basic components of responses to humor. More specifically, an individual's humor profile is described by the degree of funniness and aversiveness of the humor categories of incongruity-resolution humor, nonsense humor, and sexual humor. Both the humor stimulus and responses

factors are the result of a set of factor analyses of humor stimuli (different sets of jokes and cartoons) and response scales using various samples differing with regard to sex, age, occupation, health status and other variables.

Using the 3 WD humor test to assess funniness and aversiveness of these three types of humor, a variety of studies were conducted. The hypothesis that incongruity-resolution humor is preferred by individuals who generally dislike stimulus uncertainty and nonsense humor is appealing to those generally enjoying or searching for uncertainty was found in the domain of personality traits but also substantiated in the field of aesthetics (Ruch & Hehl, 1998). For example, while appreciation of incongruity-resolution humor correlated with liking of simple and representational paintings, and simple line drawings (such as a triangle, square, or cross), appreciation of nonsense humor correlated positively with liking complex and fantastic paintings (e.g., by Dali), liking of complexity and asymmetry in freehand drawings and polygons, and also with producing complexity in black/white patterns and enjoying and enhancing visual incongruity when wearing prism glasses which distort the visual field. While humor is in the eye of the beholder there is evidence that this subjective private experience relates to overt behavior (Ruch, 1995) and that individual differences in humor appreciation correlate with other measures of humor including peer reports (Ruch & Hehl, 1998). Yet it remains to be demonstrated that the assessment of those core inclinations to forms of humor do play a role in people everyday perception of humor.

Tonic versus Phasic Considerations

There is both interindividual (i.e., between individuals) and intraindividual (i.e., across situations) variation in humor behavior. Some people tend habitually to appreciate, initiate, or laugh at humor more often, or more intensively, than others do. In everyday language this enduring disposition typically is ascribed to the possession of a "sense of humor" and various type nouns (e.g., cynic, wit, wag) and trait-describing adjectives (e.g., humorous, witty, cynical) exist to describe individuals extreme in one form or the other. Aside of interindividual differences with a relative stability over time there are also actual dispositions for humor, which do vary over time. We are all inclined to appreciate, initiate, or laugh at humor more at given times and less at others. In everyday language phrases like to be in good humor, in the mood for laughing, out of humor, ill-humored, in a serious/playful mood or frame of mind etc. refer to such states of enhanced or lowered readiness to respond to humor or act humorously.

Effects of mood on humor are well documented (Deckers, 1998) and the importance of a playful (as opposed to serious) frame of mind in the generation of humor has been emphasized (McGhee, 1979). However, so far humor scales were conceptualized almost exclusively as trait measures. The waxing and waning aspect of humor dispositions was explicitly considered in the state-trait approach by Ruch and Köhler (1998) who argue that cheerfulness, seriousness, and bad mood as traits form the temperamental basis of humor, and that cheerfulness, seriousness, and bad mood as states represent intrapersonally varying dispositions for humor. Research utilizing the state-trait cheerfulness inventory (STCI) demonstrates that those three states vary with naturally occurring or experimentally induced fluctuations in environment, and the states are also predictive of a variety of humor behaviors and experience (Ruch, 1997; Ruch & Köhler, 1998, 1999). However, traits are also seen as dispositions for states; while everybody is in a

cheerful state now and then, individuals high and low in trait cheerfulness will differ with respect to the threshold, frequency, intensity, and duration of state cheerfulness. Furthermore, it was postulated and confirmed that cheerful states are more robust among those high in trait cheerfulness (as compared to the lows). High trait cheerful individuals "keep their humor"; i.e., maintain a good mood when facing adversity, while low trait cheerful individuals get ill-humoured more easily.

Humor in the traditional sense of the term is quite explicitly tied to situational conditions; the presence of adversity gives rise to humor as a defense mechanism. Indeed, humor as a psychological strength is particularly visible when an individual or group is facing adversity, in as much as it helps to mitigate, suppress, interrupt, or even permanently replace its negative impact upon oneself and/or the others by allowing the individual to see the light side, not taking things too seriously, taking a different perspective, or putting things into an absurd non-serious context. Phenomena like black humor or gallows humor were reported to emerge in concentration camps, to flourish under oppressive political systems, and to prevail during times of war (e.g., Nevo & Levine, 1994). Also, the content of humor produced or appreciated is known to be affected by the type of motivational state induced (Deckers, 1998).

Measurement

Throughout the 20th century there were numerous attempts to develop measures of the sense of humor and related states and traits. Typically, these were face-valid self-report questionnaires or joke/cartoon tests, but occasionally also methods, like humor diaries, informant questionnaires / peer-reports, behavioral observations, experimental tasks or interviews and informal surveys were used. Self-report measures typically are based on what an individual says on a questionnaire about how he or she typically behaves. Informants using the same questions in a peer-report version of the instrument may report the same behavior. In joke or cartoons tests of humor the individual does not need to reflect on how he or she typically behaves but they rather constitute small experiments in which behavior is recorded under controlled situations. More precisely, in tests of humor appreciation the individual is confronted with a selected set of humorous stimuli and rating scales are used to record subjective experience (sometimes supplemented by nonverbal indicators of enjoyment). Joke and cartoon tests of humor creation or wit can be quite diverse, but often the individual is confronted with an incomplete joke or cartoon, and is asked to write as many funny captions as possible. The frequency and quality of the captions, but also contents may be later evaluated. This constitutes a measurement approach where the procedure is important and not so much the stimulus material, and hence no single instrument has been developed that is used in different studies.

A survey of humor measurement tools counts more than 60 instruments (Ruch, 1998b), but many of the earlier methods were *ad hoc* measures constructed for use in only one study. Most often, these scales were simply labeled "sense of humor" tests, although the contents were quite diverse (suggesting a lack of convergent validity), and none of those scales measures sense of humor in the traditional sense (i.e., as a world view). While the assessment of humor is far from being satisfactory, during the past 10 years considerable progress has been made and several respected tools do exist that were used in research and yielded desirable outcomes. This field is still in progress and hence a broader account of instruments is given (see Table 1).

Table 1. Major Measures of Humor

Coping Humor Scale (CHS; Martin & Lefcourt, 1983)

self-report questionnaire composed of seven items reflecting the degree to which individuals report using humor to cope with stress which respondent rates in terms of endorsement on 1-4 scale

internal reliability (alpha coefficients): .60 to .70

test-retest reliability: .80 (12-week period)

construct validity: correlates .50 with peer ratings of individuals' tendency to use humor to cope with stress, not to take themselves too seriously, moderates the effects of life stress on mood disturbance.

Situational Humor Response Questionnaire (SHRQ; Martin & Lefcourt, 1984)

self-report questionnaire of sense of humor composed of 21 items measuring the frequency with which a person smiles and laughs in a wide variety of life situations which respondent rates in terms of intensity of response on a 1-5 scale.

internal reliability (alpha coefficients): .70 to .85

test-retest reliability: .70

construct validity: correlates .30 to .62 with frequency and duration of spontaneous laughter during unstructured interviews, .30 to .50 with peer ratings of participants' frequency of laughter and tendency to use humor in coping with stress, .21 to .44 with rated funniness of monologues created by participants in the laboratory, and moderates the effects of life stress on mood disturbance, and so on.

Humorous Behavior Q-sort Deck (Craik, Lampert & Nelson, 1996)

Q-sort technique consisting of one hundred descriptive statements describing specific forms of everyday humorous conduct which respondent (or observer) sorts into piles from one to nine, with one being the least, five being neutral, and nine being most characteristic of the person being assessed.

internal reliability (alpha coefficients): .61-.71, except scale 2 (.43)

test-retest reliability: not known

construct validity: various correlations with scales of the California Psychological Inventory (CPI), Myers-Briggs Type Indicator (MBTI), Big five inventory (BFI).

State-Trait Cheerfulness Inventory (STCI; Ruch, Köhler, & van Thriel, 1996)

self-report questionnaire composed of 20 items measuring cheerfulness as a temperamental trait, which respondent rates in terms of endorsement on 1-4 point scales.

internal reliability (alpha coefficients): $\sim .92$

test-retest reliability: $.84$ (4 weeks)

construct validity: correlates $\sim .60$ with peer report of cheerfulness, predicts amount of laughter in a variety of experimental settings, predicts ease of induction of cheerful mood and robustness of mood under adversity, correlates $\sim .57$ with SHRQ and CHS, and $.30$ to $.74$ with various humor scales, and so on.

Humor Styles Questionnaire (HSQ; Martin, Puhlik-Doris, Larsen, Gray, & Weir, in submission)

self-report questionnaire composed of 32 items measuring four functions of humor (self-enhancing, aggressive, affiliative, and self-defeating), which respondent rates in terms of agreement/disagreement on 1-7 point scales.

internal reliability (alpha coefficients): $.77$ to $.81$

test-retest reliability: $.80$ to $.85$ (1 week)

construct validity: correlates $.22$ to $.33$ with peer report (one item per scale), multiple correlations with other humor scales range from $.47$ to $.75$. The scales of social and self-enhancing humor correlate moderately positively with self esteem, well-being, and social intimacy, and negatively with depression and anxiety. The aggressive and self-defeating humor scale correlates positively with aggression and hostility, and self-defeating relates negatively with depression, anxiety, well-being, self-esteem, and social support.

3 WD Test of Humor Appreciation (Ruch, 1992)

performance test composed of 30 jokes and cartoons measuring appreciation of incongruity-resolution humor, nonsense humor and sexual, which respondent rates in terms of funniness and aversiveness on 0-6 point scales.

internal reliability (alpha coefficients): $.81$ to $.91$

equivalence of test forms: $.82$ to $.93$

equivalence of test forms: $.60$ to $.74$ (4 weeks)

construct validity: uncorrelated from affect-based sense of humor measures, but correlates with humor performance measures, (low) seriousness, and type nouns related to humor and humorlessness; correlates with various measures of preference for different types of art, especially with the simplicity-complexity dimension, correlates with various dimensions of personality, attitudes and values, and so on.

There are several unresolved measurement issues and the tests constructed do not always provide the information needed for their proper evaluation. Humor is a highly desirable trait and often refers to behaviors we typically do not reflect upon or partly interpret quite subjectively. Therefore self-report measures of humor are prone to be substantially affected by "method variance" and test constructors should investigate the amount of "method variance" inherent in the instrument. While the scales typically are only low to moderately correlated with measures of social desirability, it is still doubtful whether self-reports always tell the true story. Correlating the self-reports with peer-reports or behavioral measures of the same trait help to estimate the amount of variance due to the methods and to variation in traits.

One can expect that the degree to which these methods converge does depend on the component of humor measured. Ruch (unpublished data) compared the protocols of 102 German adults with the peer-evaluation done by their best friends utilizing the HBQD (Craik et al., 1996), the instrument providing the richest description of humorous behavior. Correlations were computed at the item level and the level of humor styles. The average correlation obtained for an item was .22, with the items of the Earthy versus Repressed Humorous Style yielding the highest average correlation, .29. The statements with the highest self-peer correspondence (all $<.40$) were all clearly interpersonally observable behaviors: "Relishes scatological anecdotes (bathroom humor)." "Smiles grudgingly", "Fails to see the point of jokes", "Enjoys exchanging topical jokes and keeps up to date on them", "Responds with a quick, but short-lived smile". However, one quarter of the items had correlations lower than .15. Among the items with a virtually zero agreement between self- and peers were ones which were either very private experiences and preferences (perhaps not shared with peers), or involving judgments that are perhaps based different standards, but also behaviors than might not be accessible to either self- or peers, such as: "Reacts in an exaggerated way to mildly humorous comments", "Enjoys the humor of visual juxtaposition", "Has a suggestive insinuating laugh", "Is competitively humorous; attempts to top others", "Uses humor to gain the affection and approval of others". The correlation at the level of styles was high for the Earthy versus Repressed Humorous Style ($r = .54$), and the Reflective-Boorish and Benign-Mean-spirited Humorous Styles had the lowest correlations ($r = .22$). Similar results were obtained for a sample of 60 Irish adults. Thus, it seems necessary to examine the self-peer congruence for all scales and if they diverge supplement self-reports by the reports of informants.

Method variance can be expected when the definitions of a certain components of humor imply an aspect of talent or ability. For example, wit refers to the ability to create a humorous effect and make others laugh. Wit may be best assessed by a test where individuals actually have to perform (e.g., create a funny monologue, create funny captions, or else act funny) and prove their

wittiness, but also self-reports exist where individuals indicate how witty they think they are. Studies on convergent validity have failed to find substantial correlations between self-reports of humor creation and a behavioral tests of wit (Köhler & Ruch, 1996; Ruch, unpublished data), although admittedly one needs to say that the constructs assessed were not really identical and differences can be attributed to a certain extent to differences in the constructs. In the behavioral measure used—the Cartoon Punch line production test—the test takers are asked to create as many as possible funny captions to caption-removed cartoons during a given time. The number of captions produced serves as quantitative index of wit while the averaged peer rated funniness of the captions, or the rated degree of wit of the creator serve as index of quality of humor creation. Overlap among raters is considerable; for example, in a sample of 74 German adults the correlations among the 10 raters range from .15 to .61, with a mean of .41 (Cronbach alpha = .95). Neither score, however, correlated with the HBQD-item "Displays a quick wit and ready repartee" or the total score in the Competent Humorous style which involves wit (Ruch, unpublished data) in a German (N = 74 adults) and Irish (N = 142 students) sample, just like several other self-reports of humor creation had done before (Köhler & Ruch, 1996). The CPPT does correlate with other self-report measures in the expected way though; quantity of punch line production correlates with Extraversion, and quality with Openness to Experience, Psychoticism, and negatively with trait seriousness (Ruch & Köhler, 1998). It appears that wit is better seen as an ability and measured via a test, not a self-report scale, unless the scale has shown substantial predictive validity before.

What is missing altogether? Only a handful of humor tests for children have been constructed (see Ruch, 1998b). Starting with Bird (1925) they were based on appreciation of cartoons and jokes and can be considered outdated. No questionnaire approach to the measurement of children's humor is known, impairing the life-span study of humor. The construction of a scale for the measurement of children's use of humor in coping is underway (Führ, in press). We also lack instruments to measure certain facets of humor. Humor has often been seen in the service of other virtues, like wisdom, transcendence, truth, or humanity, or – at least for a limited time and space – has been seen as a cardinal virtue itself. However, those conceptualizations from pre-scientific times have not been picked up yet by empirical psychology. While humor behavior serving kindness, for example, might be predicted by humor and kindness jointly, it might also be feasible to incorporate the virtuous intent already into the trait definition, and involve humor behaviors reflecting wisdom or kindness as items. This might be of particular interest in the case of humor as a benevolent world view, which tolerates and acceptingly smiles at the shortcomings of life and fellow-creatures, as this has been the definition most commonly agreed upon in the pre-scientific literature. Finally, the comprehensive definition of the sense of humor still remains the supreme but yet unattained goal. While the HBQD attempts to achieve this goal for the domain of reports of everyday humorous conduct, we do not have comparable approaches for other domains (like the different classes of humorous material or the humor-related lexical corpus of different languages). While at first sight this goal seems to be not of particular interest to positive psychology, it has to be reminded that the absence of certain forms of humor, or the refraining from performing certain styles of humor might be virtuous and beneficial for self and others. It is easy to get a quick laugh at somebody's expense. Resisting this temptation might also be seen as a strength and serve higher purposes.

Developmental History

This discussion is very limited because so far only appreciation of joke and cartoon humor has been studied from a life span perspective, and the age differences reported for particular self-report instruments often used a limited age range.

In a study of six age-groups from late adolescence to people older than 60 years there were no major trends in trait cheerfulness across age (Ruch et al., 1996). However, while there was no difference among the groups below the age of 40, seriousness significantly increased among all adjacent age groups thereon. A similar increase was observed for cheerful composure, a measure akin to humor in the traditional sense. Males and females do not seem to differ much in these two dimensions, and differences in other forms of humor seems to depend on the assessment technique used (Lampert & Ervin-Tripp, 1998). Martin et al. (in submission) found that men score substantially higher than women on aggressive and self-defeating humor while there is not much of a difference in social and self-enhancing humor.

More is known about appreciation of humor. McGhee (1979) discussed the early development in humor appreciation and McGhee, Ruch, and Hehl (1990) provided a personality-based model of how appreciation of incongruity-resolution and nonsense based humor might develop across childhood, adolescence, and adulthood. Most of the predictions were confirmed in a cross-sectional study involving 4,292 Germans in the ages from 14- to 66 who rated twenty jokes and cartoons representing structure-based humor categories of incongruity resolution and nonsense for funniness and aversiveness. In general, incongruity-resolution humor increased in funniness and nonsense humor decreased in funniness among progressively older subjects after the late teens. Aversiveness of both forms of humor generally decreased over the ages sampled (Ruch, McGhee, & Hehl, 1990).

Heritability

Smiling and laughter are universal and there is evidence that man is not the only animal that laughs. In ontogenetic development it emerges, later than smiling, around the fourth month; however, cases of gelastic epilepsy (from Greek; gelos = laughter) among neonates demonstrate that all structures are there and functional on date of birth. Further evidence for its innateness comes from twin studies as well as from the fact that laughter is easily observable among deaf-blind children (even among deaf-blind thalidomide children, who could not "learn" laughter by touching people's faces) (see Ruch & Ekman, 2001).

What of the heritability of the various components of humor? Major correlates of humor (like extraversion, sensation seeking, conservatism) are known to have a genetic basis, but unfortunately, no genetic study utilizing major or comprehensive humor scales has been carried out so far to provide a more direct evidence. A study of the frequency with which children use specific humor behaviors with their mothers, siblings, and friends show some genetic influence on humor use (Humor Use in Multiple Ongoing Relationships—HUMOR, Manke, 1998). As regards appreciation of cartoon humor there is genetic influence on appreciation of aggressive cartoons humor but not of nonsense, satirical, and sexual humor (Manke, 1998; Wilson, Kashriel,

& Rust, 1977). Overall, for appreciation of cartoon humor the shared environmental influence seems to be more relevant (Cherkas et al., 2000; Wilson, et al., 1977).

Nothing is known on more sophisticated and less behavioral forms of humor, like a humorous outlook on life, or what has been called philosophical humor. These more elusive forms of humor were often considered a sign of human maturity, an attitude akin to wisdom, and developed on prior suffering, pain, and exposure to an imperfect world and insight into the human nature. So far there is only anecdotal evidence that intense life events have the power to transform a person's humor (e.g., through the insight that nothing earthly is infinite, typically following a painful loss) as part of a general rearranging of priorities in life. As intervention studies are largely missing and existing ones do not yield clear results (see below) nothing much can be said about the relative contributions of genes and environment on components of humor at this stage. It might be likely, though, that the affect-based and behavioral forms (e.g., laughter, cheerfulness, social humor) might be more strongly genetically determined than humor appreciation or a humorous attitude or humor as a virtue.

Correlates and Consequences

Single acts of humor may induce positive affect and enhance a cheerful mood, whether evoked by friends, funny movies or books, situation comedies on television, or stand up comedians in nightclubs. When being in a low mood humor may help in cheering up and finding a funny side in problems and might help ameliorate the negative impact of adversity in the individual. Humor was also thought to have an impact on cognitive functioning, be it that being witty facilitates subsequent creative behavior or humor helps illustrating a point and makes it more memorable. As we like to laugh, the use of humor in speeches, advertisements and teaching affects motivation. If humorous acts do good to the individual and relationships with others, then humor-related traits should be predictive of such factors too, and humorous people should do better as teachers and speakers, in personal relationships and professional interactions, to name a few. Furthermore, the massed presence of positive outcomes, and the avoidance of negative ones may in turn have more long-term beneficial effects.

Indeed, humor as an individual difference variable is associated with a variety of desirable outcomes and personality variables but the comparison and accumulation of findings is difficult due to the use of different instruments, some used in one study only. Several instruments (including SHRQ, CHS) more often than not are involved in the moderation of life stress or daily hassles on measures of mood disturbance (see reviews in Martin, 1996, 2001). Typically, negativity of mood increases with increasing number of stressors for the low humor group whereas there is no such relationship among the high humor group. This is interpreted as a stress buffer role of humor. Likewise, trait cheerful people sustain cheerful mood during times of experimentally induced adversity while individuals low in trait cheerfulness decrease in cheerful mood and get bad-humored (Ruch & Köhler, 1998). While the intermittent variables are insufficiently investigated, one may see humor as a form of cognitive appraisal which involves perceiving potentially stressful situations in a more benign, less threatening manner (Kuiper et al., 1993). However, it has not been substantiated whether or not the different components of humor have incremental validity on top of established personality variables. Also, while the ameliorating effects on current mood are well documented, the data for a stress-moderating

effect of humor on physical well-being are less convincing (Martin, 2001). If humorous people do experience negative affect less often they might also suffer less from the long-term impact of negative emotions on health. However, findings so far do not provide evidence for an effect of humor on variables like physical health or longevity (Martin, 2001).

Measures of the affective dimension in humor, like trait cheerfulness, predict an increase in cheerful mood, laughter, and amusement, when facing a variety of elicitors, including a clowning experimenter but also laughing gas (Ruch, 1997; Ruch & Köhler, 1998). However, it is not clear whether humor has any long-term effects on subjective well-being. As laughter might affect physiological changes in musculoskeletal, cardiovascular, endocrine, immunological, and/or neural systems, components of humor that predict laughter may predict beneficial effects on health as well. However, so far few significant correlations have been found between trait measures of humor and immunity, pain tolerance, or self-reported illness symptoms (for a review, see Martin, 2001).

The fact that humor only seems to be related to desirable outcomes does not mean much, as it merely reflects the fact that investigators due to some bias tend to seek only for relationships to positive constructs, and the scales used often have the positive affect bias already built in (i.e., scales that do not allow for a neutral or broader conceptualization of humor). It is possible though to predict—guided by theory—and verify less desirable outcomes for certain components of humor. For example, finding jokes and cartoons of the so called incongruity-resolution category funny (i.e., jokes containing punch lines which contain a surprising or incongruent element, that can be made fit to the joke body completely by applying a rule, such as "blonds are dumb", "Scots are stingy" etc.) does predict punitive attitudes (including death sentence), intolerance of ambiguity, and preference for simplicity, to name a few less desirable correlates (Ruch, 1992; Ruch, Busse, & Hehl, 1988). Likewise, not all attempts to be funny are benevolent but can be hurtful to others or even the self. The study of the habitual use of aggressive and self-defeating humor styles as measured by the HSQ (or the related HBQD-styles) will show whether or not humor may even interfere with healthy adjustment or impair relationships with others.

The personality correlates of humor received much attention. The early and narrowly conceptualized humor instruments tended to correlate with extraversion highly positively and slightly negatively with Neuroticism (Köhler & Ruch, 1996; Ruch, 1994). However, instruments distinguishing different styles show that many facets of personality are somehow linked with humor. Scrutinizing the personality correlates presented for current models of humor in a publication on the sense of humor (Ruch, 1998c) one can summarize that both poles of each of the dimensions of the five-factor model are related to aspects of humor. Wit, not surprisingly, is correlated with creativity and intelligence, but also personality variables (Feingold & Mazzella, 1991; Ruch & Köhler, 1998).

Factors that Encourage or Thwart Humor

Speakers of most languages know expressions referring to somebody losing or cultivating his/her sense of humor. However, most research regarding environmental influences on humor has looked at the effects of current physical and social factors on current perceived funniness of, or amount of laughter to humor (e.g., Chapman, 1983) and only rarely have examined the longer

lasting effects on humor as an individual differences variable. Nevertheless, some research exists regarding the proximal and distal antecedents of humor. Basically, these factors either posit that humor is a natural extension of one's emotionality or playfulness, or developed as a means of coping with life's less pleasant circumstances. Given the current lack of knowledge on the importance of nature and nurture in humor one can only speculate about the relative importance of those factors.

As regards facilitating factors, the existence and cultivation of "joking relationships" could be crucial. That is, peers that encourage unrestricted indulgence in all forms of humor, where funny ideas can be exchanged and humor skills developed; where people can freely "regress" and even be silly and childish. If humor is modeled, then besides parents, teachers and peers also the media will have to be considered. Nowadays humor is offered in abundance in form of books, funnies in newspapers, films, TV, on stage, etc. so that there are plenty of occasions to learn how to be funny, either by sheer reproduction or by learning the rules and generating one's own humor on the spot. Obviously, with all those factors a bidirectional relationship can be assumed (e.g., humorous people might be more likely to engage in joking relationships, and engaging in joking relationships might increase one's humor) and hence a design allowing for a causal analysis is necessary.

In a similar vein McGhee (1999) sees playfulness (vs. seriousness) as the motor underlying the sense of humor. As humor is one form of play—play with ideas—factors encouraging or hindering play might affect humor. Without a playful frame of mind, the same event may be seen as interesting, puzzling, annoying, frightening, etc., but not as funny. Irony is wasted on those who take everything literally. While some people might be very good at spotting the incongruities, absurdities, and ironies of life, only the mentally playful will find humor in them while those with a serious attitude or frame of mind will not treat them humorously. McGhee assumes that while children inherit playfulness, influences of socialization counteract it and may cause a shift into seriousness making individuals lose their ability to be playful when going through school or on the workplace. Again, the rediscovery of a playful attitude or outlook is a key element for change; its activation triggers the other components.

If playfulness is seen as the foundation of humor, then societal factors and group norms relating to being playful may be crucial in the development and fostering of humor. Play behavior may be seen as negative (as expressed by words like childish, silly, ridiculous, nonsensical) and as countering, or at least not supporting development into a mature and successful adult by some caretakers (parents, teachers). Where such ideas prosper, the prevention of overindulgence in play might be seen as a prime goal of the caretaker and consequently the building up of seriousness a goal in education. A preponderance of seriousness, however, might impede the development of humor. It remains yet to be tested whether parents' (serious vs. playful) outlook on life encourages or thwarts the offspring's attempts at humor and whether or not this has a lasting effect on their humor. Intuitively it might also be possible that some children's humor and playfulness developed in reaction to parent's seriousness. Other rules might be active during adult life too. For example, humor at work might be seen as not taking work seriously or not being mature. Societies and groups might differ regarding what behavior is "appropriate" for certain ages, and if being mature and serious is important, the expression of humor is impeded.

Also the development of specific forms of humor was proposed to be contingent on certain antecedent constructs. Schmidt-Hidding (1963) summarized the pre-empirical literature that humor (in the narrow sense) was seen to be based on a sympathetic heart, wit on a superior spirit, mock/ridicule on moral sense or even haughtiness/maliciousness, and fun was considered to be an expression of vitality/high spirits. This is partly echoed by the empirical literature showing that the ability to create humor is correlated with intelligence or creativity (Feingold & Mazzella, 1991), or that bad mood predicted scores in the comic styles of satire, cynicism, and sarcasm (Ruch, 2001). In particular, the early literature assigned cheerfulness a special role in the development of humor in the narrow sense in as much it was suggested that a humorous attitude or world view is the product of a cheerful temperament and certain enabling factors (like negative life experiences and acquired insights into the human nature and human existence). A person with a humorous attitude is someone who understands the insufficiencies and shortcomings of life and fellow humans but also tolerates and forgives them. Humor in this sense is considered to be serious as well in that it contains the wisdom that nothing earthly and human is perfect and in this respect humor is different from merriment or hilarity. The former is contemplative, pensive, and profound, the latter thoughtless, superficial, and shallow. In a partial support of this hypothesis Ruch and Carrell (1998) found a mid-size correlation between trait cheerfulness and a questionnaire measure of "laughing at yourself" with components of seriousness showing incremental validity in predicting this indicator of humor in the more narrow sense. However, the total score of this multidimensional sense of humor scale and trait cheerfulness were almost indistinguishable from each other. Similarly, in a study of temperamental predictors of comic styles it turned out that trait cheerfulness was positively related to humor (in the narrow sense), but also fun and nonsense (Ruch, 2001). This does support the view that the nature of the preferred comic style is based on one's prevalent mood. However, a more convincing test of the hypothesis that at least two factors are necessary for a humorous attitude to develop — a cheerful temperament and prior successfully mastered adverse life experiences — requires a genuine attitude / world view measure of humor as well as an assessment of those enabling factors. At best in a longitudinal study with trait cheerfulness assessed prior to the life events (so that it is not itself affected by them) and humor assessed after these life events.

Finally, there is also the view that humor solely developed from adverse circumstances — especially so in particular in psychoanalytic writings. For example, Fisher and Fisher (1981) investigated the personality characteristics and familial and childhood antecedents of professional comedians and circus clowns, but also "class clowns" from a psychoanalytic perspective. They found, among others, that comics described their fathers in more positive terms and their mothers in a more negative manner than a control group of actors did. Likewise, the mothers of the children identified as "class clowns" or "schlemiels" were less kind, less sympathetic, less close and intimately involved with their children, and more selfish and controlling. Consequently, Fisher and Fisher theorized that comics develop their humor skills in childhood as a means of entertaining others, gaining approval, and asserting their goodness, in the context of an uncongenial family environment characterized by limited maternal affection and warmth, a need to take on adult responsibilities at an early age, and a sense that things often are not what they appear to be on the surface. These data are open to alternative interpretation, in as much as the ability to create humor is positively correlated with psychoticism — a highly

inheritable trait – and the given description of the mothers suggests that they might score high in this basic personality dimension as well.

It should be emphasized that the notion of humor as a means of coping with adversity relates to humor in the traditional sense only—not to what humor is meant to mean when used as an umbrella term. While indeed adversity may raise or activate humor, enduring or intense traumatizing events may cause somebody to lose interest in engaging in humor altogether. Hence, earlier losses and difficulties alone seem not to be sufficient to develop humor. However, if they yield certain insights (e.g., the sudden insight that life is not eternal that may follow having been close to death) or they help in rearranging values and priorities and put things into perspective, a shift might occur facilitating a humorous outlook on life (e.g., by not taking trivialities too seriously and enjoying the smaller things in life).

Cross-National and Cross-Cultural Aspects

Folk wisdom tells that there are national styles of humor and some nations are well known for their sense of humor (e.g., British humor, Jewish humor), while national stereotypes sometimes seem to suggest that others lack it altogether (e.g., Germans, Japanese). Most of cross-national research involved describing national styles of humor, or comparing jokes found in folklore archives of different parts of the world (Davies, 1998; Ziv, 1988), but so far no research program compared humor as an individual difference variable across several countries simultaneously. Nevertheless, researchers have translated scales measuring some aspects of humor (e.g., CHS, SHRQ, MSHS, HBQD, STCI-T, 3WD) into other languages for use in research projects, and some byproducts of the adaptation allow being interpreted. Typically, the factor structure, internal consistency and main correlates of the questionnaire were retained (e.g., Martin, 1996), suggesting that some aspects of humor may be comparable across nations. Also the factor structure of the 3 WD test of humor appreciation is comparable across different Western countries (e.g., Austria, Canada, England, Germany, France, Italy, Israel) as are the main personality correlates of appreciation of humor (Ruch & Hehl, 1998).

Deliberate Interventions

Nevo, Aharonson and Klingman (1998) discuss that theoretically there can be two opposing approaches to improving humor. From a psychoanalytic perspective one can expect that improvements in sense of humor emerge indirectly as a result of therapy or maturation. Only an inner change in a more healthy direction will bring about improvements in humor, and the application of techniques directed at the humor itself are of no effect. However, adopting a cognitive behavioral approach one would predict that the direct learning of deficient behaviors, reinforcement, and cognitive restructuring activates and improves a person's humor.

Several programs aimed at the improvement of the sense of humor exist and they are based on the assumption that humor is a set of skills that can be taught by deliberate interventions. Such programs are prevalent in hospital, educational and counseling settings, however, few data on their effectiveness have been gathered so far and they did not provide unequivocal results. The

program described by McGhee's (1999) is based on the assumption that playfulness forms the basis for the sense of humor, and the rediscovery of a playful attitude or outlook on life is a key element for change. Furthermore, there is the assumption that there is a set of skills that can be taught during group meetings and "homeplay", and which differ in difficulty. The program involves eight steps ordered in difficulty from simple (e.g., enjoying humor in everyday life) to difficult (e.g., laughing at yourself, finding humor in the midst of stress) to acquire. Earlier steps need to be successfully mastered to finally be able to have access to humor skills in the midst of stress. An ad hoc scale of 40 items is provided (humor quotient test) that partly matches these steps and is aimed to assess progress in the skill to be acquired. While no published data exist on the effectiveness of the program Simone Sassenrath (personal communication, Nov. 2001) reports that the group of 20 adults that underwent the theoretical and practical part of the program (but not the three other groups) over a span of two months yielded increases in self-reports of the sense of humor (i.e., the six scales measuring those skills), in playfulness, positive mood (all subscales of the Humor Quotient Test), and the CHS, and reductions in the seriousness and bad mood scales of the STCI. Some of those increases still prevailed one month after the end of the intervention.

Nevo et al. (1998) designed a systematic program for the improvement of the sense of humor and tested its effectiveness in a sample of 101 female high-school teachers in Israel. The intervention program consisted of 14 units and was designed to specifically activate the proposed motivational, cognitive, emotional, and social components of sense of humor. Three other groups either received only part of the program, or formed a control group or were only tested before and after. Results provide only partial support for the hypothesis that the two humor groups would show improvement on the humor measures in comparison to the control groups. For example, participants in the humor improvement program were rated by their peers as higher in humor appreciation and humor production after the program, in comparison to their rating before the program and in comparison with the control group. But there were no differences in a variety of questionnaires (e.g., the SHRQ) or a humor production tests used.

It appears that effort has been spent on developing programs, but it is not clear how long such programs should be conducted, whether everybody can lead them, who will likely profit, what is expected to be improving (selective skills or the global sense of humor). It is also not clear whether the scales applied in the few studies are actually sensitive to change. Finally, humor as character strength may be used in destructive ways as in put down witticisms, but when guided by benevolence, wisdom or transcendence, it may be used in virtuous ways to foster relationships, strengthen group morale, act as a social lubricant, promote intimacy, provide insight and facilitate the 'good life' generally. Therefore, future programs might want to incorporate the unlearning or refraining from destructive uses of humor and to test whether the virtuous use of the humor skills can be learned as well.

What is Not Known?

Humor has been a neglected area in psychological research for a long term. Therefore some very basic questions need yet to be addressed or readdressed. Furthermore, the full relevance humor in people's daily lives has not been explored yet, so studies need to address correlates and consequences of humor as a character strength:

- What is the number and nature of dimensions necessary to describe the full range of habitual individual differences in humor behavior and experience? Are those dimensions invariant across groups, nations, and cultures? Which of those can be seen as character strength and beneficial to the organism and its environment, which ones are detrimental?
- How to measure those dimensions? Is self-report valid for all aspects, even despite the fact that humor is high in social desirability and some aspects of humor are conceptualized as ability (i.e., maximal behavior) rather than style (i.e., typical behavior)?
- Can the philosophers' and humanists understanding of humor as a world view and benevolent and "smiling" attitude towards the imperfections of the world and shortcomings of fellow persons be transformed into a descriptive trait concept solidly rooted in behavior and experience and objectively assessed? How does such a concept empirically relate to the contemporary "shallow" understanding of humor, and does it have a higher predictive validity for gain of pleasure under adversity?
- How do different forms of humor develop over the life span, and what are the driving factors? What role does genetics and environment play?
- Do humor and cheerfulness have benefits beyond those conferred by the absence of negative emotionality?
- Which forms of humor can be learned? Does teaching of humor skills permanently alter a person's humor abilities and styles? Do intervention programs that improve components of humor result in positive outcomes or merely the absence the negative outcomes?

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