Unresolved issues in research on humour and laughter: The need for FACS-studies

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Positive Psychology brought a renewed interest into the factors that constitute the “good life.” In fact, it attempts to study neglected areas, like positive experience, positive traits, and positive institutions. The study of humour and its experiential and behavioural consequences does fit well into this field, as humour typically induces positive emotions and an upward lift in positive mood, and trait cheerfulness and the sense of humour can be regarded as traits predicting such life outcomes like well-being and satisfaction with life (Peterson, Ruch, Beermann, Park, & Seligman, 2007; Sommer, Hösli & Ruch, 2006).

Especially with such positively valued constructs it is essential that studies also incorporate objective data rather than relying exclusively on verbal data. A finding that, for example, trait happy people also respond to certain stimuli with more positive affect might be tautological as scales and verbal ratings might converge just by the sheer fact that individual differences in response style exist. Clearly, verbal data need to be supplemented by behavioural and physiological data.

Research on humour and laughter profit from adopting FACS in their research in a variety of ways. First, the affective responses to humour involve smiling and laughter and their study should not be restricted to subjective experience only. Secondly, hypotheses on the positive effect of a humour stimulus on health (or other positive outcomes) implicitly assume that all individuals respond positively; i.e., enjoy the humour presented. This is clearly not the case, as individual differences in the appreciation of style on humour exist. Some might actually experience negative emotions if they have to watch a film by a comedian they don’t like. Furthermore, the effect might be contingent on the emergence of the emotion and concomitant behaviours, not the exposure to humour alone. For example, several studies tried to demonstrate that presenting humour to individuals leads to higher pain tolerance. These studies yielded mixed results, but none of them actually measured smiling or laughter. Later, a FACS-based study showed that the analgesic effects depend on the presence of the Duchenne display (Zweyer, Velker & Ruch, 2004).

Thirdly, a very careful analysis of the smile or laughter is necessary, as humour often has a dark side, and humour considered to be “bitter,” “black,” or “macabre” might have traces of negative emotions mixed with the enjoyment display.

The latter might be the case when humour is directed at oneself. We often have difficulties enjoying humour when we are the butt of the joke. The same cleverness of the punch line might amuse us when others are the targets but we might find it less funny if we are the objects of laughter. Some theorists claim that humour always involves disparagement of some form, and that
something malicious and potentially harmful must happen, or at least, the inferiority of someone or something must be implied, before a humour response can occur. Typically it was predicted that humour appreciation varies *inversely* with favourableness of disposition toward the agent or entity being disparaged, and varies *directly* with favourableness of disposition toward the agent or entity disparaging it (Zillman, 1983). The disparaged entity, if present, might be enjoying the joke, but if the person laughs or smiles, one might expect to see some effect of the disparagement on the nature of the smiling or laughter.

Measures of the sense of humour are blossoming (e.g., see Ruch, 2007). However, too little effort has been spent on identifying the core components of this trait. There is no comprehensive definition or measurement of the sense of humour yet. The sense of humour may relate to differences in (a) the degree to which individuals comprehend and appreciate jokes, cartoons, and other humorous materials, (b) the amount the person laughs and is easily amused, (c) their ability to create humorous comments or perceptions, (d) the tendency to tell funny stories and amusing other people, (e) the degree to which they actively seek out sources that make them laugh, (f) their memory for jokes or funny events, (g) their tendency to use humour as a coping mechanism, (h) the attitude of not taking oneself too seriously, (i) a “smiling” attitude toward life and its imperfections; an understanding of the incongruities of existence, (j) a cheerful composed frame of mind amidst the adversities and insufficiencies of life, (k) the ability to laugh at one's own expense.

While static signals of the face are not indicative of personality traits the dynamic signals may be. This might be the case for the sense of humour as well, as a few of the above definitions do involve affective components. Indeed, trait cheerfulness (i.e., the temperamental basis of the sense of humour) has been shown to predict the amount individuals laugh and are amused, the latency with which they remembered a funny event, and “keeping humour” when facing adversity (and using humour as a coping mechanism) (Ruch & Köhler, 2007).

Often the terms “smiling” and “laughter” are used more metaphorically, as in the “smiling attitude towards life”, or the “smiling inwardly.” Surprisingly, the most commonly agreed core element of the sense of humour has not received much empirical attention, namely the often-acclaimed ability of humans’ to laugh at their own expense. This quality was said to be distinctly human. McGhee (1993) proposed a measure of the sense of humour, which contains a component called “laughing at oneself.” First empirical examinations of the scale did yield a satisfactory Cronbach alpha for the scale in German (α= .78) and US-samples (α= .80). However, one might
expect some problems though with questionnaire measurement of this facet. As it is such a positively valued trait one needs to see to what extent it is affected by social desirability. Also, so far we don’t have information on self-peer correlations; does self-description converge with how people are seen by their peers. Most of all, what does the concept entail? How may “laughing at yourself”-be operationalised? Do we literally have to “laugh” (i.e., emit sounds) or would “smiling” count as well? If we get angry or upset when we are the targets of humour we clearly cannot claim to have the ability to laugh at ourselves. But how would “accept” (but no facial response of enjoyment) being the target of humour be coded? Then, if we do show a facial and/or acoustic response what criteria do we set up that count as “laughing at yourself”? A “grin and bear it”-smile? Furthermore, we need to ask the question what is the nature of the stimulus that we are supposed to be amused about? Does it have to put us down? Is it blunders and mishaps that happen to us? The scale by McGhee (1993) contains the following items: “I have no trouble poking fun at certain physical qualities of myself”. “I often find humour in my own embarrassing incidents or personal blunders”. “I find it easy to laugh at others' jokes when I am the butt of the joke”. “I have no difficulty telling jokes in which I am the butt of the joke”. “I often tell others about the funny side of my blunder or embarrassing incidents.” Inspection of their content shows that they refer to a variety of objects of humour (own physical qualities, embarrassing incidents or personal blunders, being butt of jokes). The behavioural side refers to “poking fun at”, “finding humour in”, “telling others about”, and “having no difficulty telling jokes about.” But also “finding it easy to laugh about.” Some of the words are relating to ability (trouble, difficulty, easy) suggesting that there are obstacles involved that this trait of temperament helps to master.

Nevertheless, it might be interesting to investigate the phenomenon in behavioural terms.

The boundaries of the concept are clearly broader; nevertheless, the actual occurrence of genuine laughter of enjoyment when facing ones own inadequacies might be a good marker of the ability to laugh at oneself. The laughter of enjoyment would be the Duchene Display plus laughing sounds. Thus, one could code the emergence of the joint contraction of the zygomatic major and orbicularis oculi muscles (plus lowering the jaw and opening of the mouth) plus changes in respiration as the criterion for being able to laugh at oneself. Being amused is more often accompanied with smiling than with laughter (Ruch, 1993). Thus, more likely the Duchenne Display will be observed. The question arises what the occurrence of action units other than the AU6 plus 12 (and 25, 26) would mean. While for purely amusing stimuli other AUs would tell the humour is not appreciated and one might not want to subsume such responses under enjoyment,
for humour directed at oneself one would expect traces of negative emotions or discomfort to occur more frequently. In fact, by nature these stimuli are capable of upsetting or annoying us, and the actual emergence of laughter under such circumstances might indeed count for the sense of humour of that person (even if the face is indicative of being emotionally affected). There even might be events where genuine laughter might indicate mental illness. Thus, we face two tasks here that need to be accomplished. First, one would need to study what type of facial responses occur at all in situations where someone is laughing at him- or herself and determine what their meaning is. Secondly, the relationship of these displays in relation to the ability vs. inability to laugh at oneself would need to be examined. Can those responses be clustered or even be located on a dimension of relating positively and negatively to humour directed at oneself? In any case, it needs to be clear which responses may be indicative of a sense of humour and which ones counter indicative.

Another unresolved issue in research on humour and laughter where FACS might help is the study of what types of laughs exist and what their nature is. While laughter is an acoustic signal it usually is superimposed on an emotional facial expression. It might be that variation in emotion that accounts for some of the types of laughs commonly described. For Darwin laughter was an expression of joy, but we also know hysteric, scornful or derisive laughter. Indeed, when counting the attributes of laughter as occurring in natural language the number easily exceeds a couple of hundred. Some of those are purely evaluative, metaphorical, or reflecting parameters of laughter (such as duration, intensity, lack or degree of regulation, rhythm, perceived sound quality). However, others contain affective information by referring to the emotion and motivation of the laughing person. Some of those might reflect the perspective of the person; whether the laughing person, the addressee of the laugh or an observer, describes the nature of laughter. Considering these and similar levels one might reduce the diversity found in everyday language to a manageable list of laughs one is still left with variations in laughter current research and theorizing can not account for. Likewise, the historic discipline of “Ausdruckspsychologie” (psychology of expressive movements) suggested distinguishing among types of laughs. However, they did not leave us a consistent classification of types of laughs, nor did they seem to agree on the morphological basis of any of the putative types. Defining different types of laughs at exactly this basis can be considered a major project that needs to be tackled from many angles. It needs to be solved as a lot of current research is devoted to the benefits of laughter on physical and mental health. Most likely, not all of them will be relevant and might even have detrimental effects.
References


