

## REVIEW ARTICLE

# What's Wrong with Being Funny? A Clinician's Perspective on Humor and Behavioral Intervention

Steve Ward, MA, BCBA

**Authors' affiliations:**

Whole Child Consulting, LLC, 3853 E. Riverside Drive, Dunnellon, FL 34434

**Corresponding author:** Steve Ward, (352) 425-2063, E-mail: [steveandterry35@yahoo.com](mailto:steveandterry35@yahoo.com)

**Abstract**

This non-data based paper is inspired by extensive clinical experience suggesting that behavior intervention plans tend to be overly rigid and, specifically, that the potential benefits of “humor” are frequently underappreciated. Behavior plans usually include descriptions of supports and of behaviors to be reinforced, and careful operational definitions of behavioral excesses, to be put on extinction, punished, or from which students are to be redirected to a more appropriate behavior. Subjective descriptions are difficult to define operationally, and this is likely one reason that humor is not typically addressed in behavior plans. In the current paper, I describe some potential benefits of humor and argue that we should sometimes use more flexible criteria for describing “inappropriate” behavior. I will provide behavioral analyses of some potential functions of “humor”, describe potential research methods, and describe cautions and recommendations regarding the use of humor in behavior intervention plans.

**Keywords:** humor, behavioral interventions, modeling, shaping, social validity

**Introduction**

“You have a perfect face for radio”, I told a 16-year-old student diagnosed with Level 1 (mild) Autism Spectrum Disorder. In interest of confidentiality, we’ll refer to him as “Calamity”. At first, Calamity didn’t understand, but after a 5-second explanation, he was laughing and when we returned to his home hours later, he couldn’t wait to

tell his dad that *he* “had a perfect face for radio”.

Calamity had experienced years of, largely effective, behavioral intervention. He could state rules for social expectations and he tended to demonstrate good manners. But he was uncomfortable in social situations, tended to provide only brief verbal responses, and was barely able to order

food in a restaurant despite a fully intact verbal repertoire. His parents indicated that consequences, good or bad, didn't matter...Calamity would simply adjust to having nothing.

In addition to providing frequent exposure to social, and other, challenges, I modeled humor for Calamity and generously reinforced, with smiles and humorous responses, most of his attempts at humor. Establishing the value of humorous interactions apparently increased the value of my attention, and attention was then used to teach a variety of skills. Besides now being crazy for puns (for which I owe the world an apology), Calamity interacts readily with a wide variety of people in the community.

Shamus, whose name has also been changed to protect the guilty, recently told my partner, Terry, when asked what he wanted to talk about, that he wanted to "talk about when she was leaving". This could obviously be interpreted as "rude", and it made his parents uncomfortable. It would have been easy for any behavior analyst to tell Shamus this was rude, or to give him an "X", or to use planned ignoring. And those consequences wouldn't have been wholly inappropriate.

But Terry chose (probably correctly, based upon the qualities of their recent interactions) to interpret it as a failed attempt at humor. She responded, "It sounds like you're trying to be funny. Do you want to try it another way and see if it makes us laugh?" Shamus tried a few other ways, without generating anything laugh-worthy. But, at least the experience did not function unnecessarily as a punisher of attempted humor and did not establish "signs of damage" to Terry as a reinforcer. In much less behavioral terms, the interaction didn't lead Shamus to crave revenge against Terry.

In this paper, I will: describe some potential benefits of humor; provide behavioral interpretations of some potential functions of humor; speculate about how humor emerges and how to teach it; provide recommendations for potential research; and describe a few pragmatic cautions and recommendations for the use of humor in behavior intervention plans.

I am not suggesting an overhaul of current trends in behavior intervention plans (BIP's), nor am I suggesting that every learner's BIP needs to be littered with recommendations for humor. But I am suggesting that much of the positive feedback learners currently receive is lame and minimally effective. And, in addition to a variety of other factors impeding reinforcer efficacy, (e.g., premature use of thin interval schedules of "reinforcement"), the *qualities* of socially mediated "reinforcement" warrant further analyses.

### ***Potential Benefits of Humor***

At a minimum, humor provides another option for reinforcement. Experience suggests that learners are less likely to satiate on humor than on other items or events and, unlike many items, humor cannot be stolen. Humor is gluten free and does not cause cavities.

To the extent that humorous interactions can take the place of other, less natural, reinforcers (e.g., edibles, points, etc), behavioral interventions can enjoy greater social validity (Wolf, 1978). Those observing our interventions will be less likely to think we are bribing or "training robots".

Humor is necessarily a social interaction, which may not only increase the value of others' attention, in general, but may also specifically: condition others' smiles/laugh-

ter as reinforcers; improve attention to auditory stimuli; improve attention to visual stimuli; improve responsiveness to a variety of directions and prompts; and, help to establish a forum in which joint attention (Mundy, Kasari, & Sigman, 1994) naturally emerges. A student who appreciates the humor in our behavior will show an increased likelihood of attending to the things we say and do. A student who appreciates our laughter will show an increased likelihood of directing our attention to his behavior.

Whether assessing its value as a reinforcer for problem behavior or for appropriate behavior, "attention" is a blunt description. Using a single-operant assessment protocol, Smaby, MacDonald, Ahearn & Dube (2007), for example, found that two students preferred head rubs over tickles, one preferred tickles over head rubs, and none of the 3 were particularly moved by verbal praise.

Piazza, Bowman, Contrucci, Delia, Adelinis & Goh, (1999) conducted functional analyses demonstrating that physical attention was more effective than verbal attention for one student and that verbal reprimands were, unfortunately, more effective reinforcers than verbal praise for another student. Especially for the second student, it is possible that exaggerated, humorous responses to appropriate behaviors would have more effectively competed with forms of attention available for problem behavior.

When a learner's insults are maintained by signs of anguish (a specific type of attention), insult-contingent smiles, laughter, or humorous retorts may provide a form of extinction. Contingent arguing, frowning, or attempts to punish may be functioning as reinforcers, and withholding these specific types of reactions may therefore function as extinction, without

requiring a more typical, more comprehensive, form of planned ignoring. Complete planned ignoring may provide an unnecessarily blunt form of extinction.

In fact, laughter, smiles, or retorts may be *more* effective than planned ignoring by virtue of providing feedback inconsistent with subsequent signs of anguish. This may provide a refined form of stimulus control.

Planned ignoring may be completely appropriate, but may also yield extinction bursts. Attempts to punish may be appropriate, as well, or may inadvertently reinforce the behavior by functioning as an indicator of anguish (e.g., "Yes, that was insulting and you know I heard it and interpreted it in that way because I'm putting an "X" on your page"). Attempts to punish can establish the value of revenge as a reinforcer and can manifest in counter-control (Sidman, 1989). This reinforcer-establishing effect is sometimes stronger than the punishment effect, resulting, at least in the short-term, in more harm than good.

Humor can help to decrease student sensitivity to a variety of stressors. Skinner (1953) described a primary benefit of psychotherapy as the emitting of previously punished behaviors in the presence of a non-punishing audience. These interactions "unpair" conditioned punishers from unconditioned punishers. These "unpairings" reduce the punishing and response-eliciting effects of conditioned punishers/elicitors.

Similarly, in some examples of humor, we say or do things that resemble conditioned punishers. In the past, if someone bumped Jimmy's arm, it may have meant that they wanted to fight. If someone asked whether Art needed a diaper, they may have subsequently tormented him extensively.

When I bump Jimmy's arm or ask Art whether he needs a diaper, I have a big smile on my face and I laugh along with them if they "get it". There is no subsequent torment. The interaction weakens the conditioned punishing effect of the physical contact and the "rude" question. In fact, in many cases, this type of humor changes the function of those social stimuli from conditioned punishers to conditioned reinforcers.

### ***How does humor develop?***

People tend to learn emotional reactions to events via the reactions of those around them. You've probably noticed that when you've made a joke causing adults to laugh, children lacking the capacity to understand the joke have looked with interest at the laughing adults and at you.

I had a recent experience demonstrating this phenomenon. My 14-month old niece, in the absence of any identifiable stressors, whined. I mockingly asked, "Oh no, is nothing wrong again?" Each of the 5 adults in the area immediately laughed. My niece stopped whining, looked at me, and smirked. There is no way she understood what made my question funny, but she clearly understood that the laughter was a result of my question and her attention was naturally drawn to me.

Before a child knows why something is funny, he tends to appreciate the laughter of others. Later, events resembling those that have preceded others' laughs can develop the capacity to make a child laugh. Soon thereafter, children begin to imitate those "funny" behaviors.

People may learn fear or anger through a history in which adult emotions are modeled contiguous to unconditioned punishers, which also likely function as

unconditioned elicitors. Perhaps a toddler spills some milk. If her caretaker loudly says, "Crap!" and moves in a hurried manner to clean the mess, these caretaker actions are likely to startle the toddler...to function as unconditioned punishers and unconditioned elicitors. The toddler is likely to quickly become increasingly sensitive to spilled milk as a conditioned punisher and conditioned elicitor...to learn that spilled milk is bad...an event worthy of fear or anger.

Alternately, a toddler will frequently fall down. When she does so, her caretaker may chuckle and say, "You go boom!" Though the initial outcome (i.e., falling) tends to initially function as an unconditioned punisher/elicitor, toddlers whose caretakers interpret it as funny will soon learn to smile and get up. And toddlers whose caretakers are exceedingly startled by the fall will become more likely to cry. Most children are born with the capacity to learn emotions in this manner.

### ***Teaching humor***

Humor is best taught through procedures resembling the typical developmental experiences described above, rather than through scripted procedures employing prompting, fading and extrinsic reinforcement.

At the earliest levels (McGhee, 1984), we can model humor by simply using materials in incorrect and/or exaggerated manners. We can model things being used or behaving incorrectly, such as a banana used as a phone or small shoes worn as earmuffs. If drawing a smiley face on a student's math sheet, we can give the smiley face ridiculous hair. In any of these cases, if your student shows indications of appreciation, you've got a good start on teaching

humor. You can soon expand upon the variety of your examples.

If your learner shows neither signs of interest nor signs of anguish, it may be best not to offer very frequent “humorous” models. Rather than providing potential examples of humor every few minutes, it may be appropriate to provide a few modest examples per hour, or per day.

If a student is noticeably upset by your attempts at humor, stop demonstrating that exact example of “humor” and minimize your attempts at humor, in general. In this case, you may need to conduct a more refined analysis of the types of events the student (dis)likes...perhaps he is upset by things that aren’t “right”, by delays in tangible reinforcer delivery that are sometimes inherent in “humorous” actions, or is offended by a relatively aggressive form of “humor” (e.g., calling him a “turkey”). Students demonstrating these rigidities and intolerances may benefit from flexibility and tolerance training, and progress may be required with those repertoires before there is a realistic chance that your student will find you funny.

We can capture natural opportunities to model emotional responses to events. Consider the following example. Ryne is a 5-year old boy diagnosed with emotional disturbance. While waiting in line, he accidentally bumped into the student in front of him and, after he backed up, his peer backed into him a few times. Ryne and his peer both appeared moderately perturbed and, without any adult intervention, probably would have been pushing each other within the next 10 seconds.

But I observed that Ryne noticed me sitting right there and that he referenced me for my reaction. I smiled. Ryne smiled and the whole interaction became a joke, not an

altercation. Naturally, Ryne and his peer soon escalated the magnitude of the joke, and did require some redirection. But the initial emotional reaction was an appreciation of humor, not anger, and this probably left Ryne more prepared to respond to a gentle redirection (i.e., “Ok, now let’s stand right”).

Learners can also acquire a sense of humor by imitating the humorous behaviors of others. With relatively early learners, we may earn a laugh by making a toy alligator say “mooo” or by tripping over a beanbag. Much more advanced learners may enjoy jokes requiring advanced verbal repertoires (McGhee, 1984)... “Did you hear about the guy who was shot by a starter pistol? They’re saying it was race related”. Calamity taught me that one.

Especially for learners who are overly sensitive to others’ jokes or insults, it can be helpful to arrange joke opportunities with yourself as the subject. When teaching a class of adolescent boys with emotional disturbance, I invited them to comment on my haircut<sup>1</sup>. When the first student said that it looked like I’d had a fight with a lawnmower, I smiled and jokingly asked an aide to give him a demerit point for “shows respect”. After another student levied a similar insult, a third student said that it looked good, and I awarded him a bonus point.

In any case, the development of a sense of humor is always “better with you than without you”, and interactions of that nature almost always improve the student-teacher relationship.

---

<sup>1</sup> I’m a fan of cheap haircuts, and the results of this one were particularly horrific.

### ***Responding to student humor***

We can analyze the development of, and our responses to, humorous behavior as analogous to the development of mand repertoires. Few behavior analysts would emphasize contingencies for teaching tolerance of delays<sup>2</sup> to a student who does not yet mand spontaneously. Optimally, various qualities of mands are differentially reinforced for an extended period of time before threats to general manding levels are introduced.

So, why should we prematurely introduce blunt contingencies in behavior plans for kids who may be trying to engage in humor? Couldn't we sometimes interpret "inappropriate behavior", as an emerging, potentially valuable, repertoire that we can shape into appropriate humor? For the student whose "inappropriate behavior" is apparently maintained by "signs of anguish" in others, could we not begin to teach him authorized means of creating that "anguish" (i.e., authorized jokes)? Can we have him earn the opportunity to fill out a MadLib about the secretary so that he can go read it to her? Even sarcasm, though frequently inappropriate, is much more appropriate than physical aggression. These are examples of "shifting reinforcers" (Winston, 2012).

We know that the percentage of learner responses contacting reinforcement, including awareness of accuracy as a form of reinforcement, impacts learning (e.g., Horner, Day, Sprague, O'Brien, & Heathfield, 1991) especially when that

percentage is contrasted with the percentage of responses contacting some form of punishment (e.g., a correction procedure). I argue that, whether during work or downtime, the percentage of social responses contacting reinforcement also affects, loosely speaking, "investment in the student-teacher relationship". Learners are more likely to continue to "try" with people with whom they have succeeded enough in the past, and with whom their social behaviors have not been excessively punished.

By contrast, poorly engineered relationships, just as token economies with exceedingly stringent criteria or prematurely thin schedules of reinforcement, tend to result in "divestment". Among other things, this "divestment" can be observed via a learner's rejection of tokens during downtime.

Consider the proportion of "inappropriate" behaviors judged as either "funny" or at least an attempt at being funny. These behaviors could be followed by learner-friendly prompts for improved humor, sarcastic laughs, or humorous retorts. We may thereby improve the proportion of social initiations contacting some form of reinforcement versus some form of extinction or punishment, and this may increase learner "investment" in the relationship.

Please consider the following examples of possible consequences of student responses.

---

<sup>2</sup> Although, there are exceptions to everything, and some students seem to learn mands more efficiently if they are first taught to tolerate delays in reinforcer delivery, especially when addressing "scrolling".

Student response	Consequence 1	Consequence 2 (all accompanied by smiles...intended as jokes, not as punishers)
(sarcastically) “Nice job on that painting”	“That’s not nice. Say you’re sorry”	“Yeah, and you did soooo well on your painting” (with Rodney Dangerfield eye-roll)
Draws picture depicting beating of peer	Treated as a threat, call the parents, etc	Add to the drawing...humorous punishment by teacher (e.g., kick in butt)
Name calling	“X” on point sheet, separates peers, forced apology, etc	Name-call the name-caller (e.g., “Ok, Andy-pamby”)

Of course there are plenty of times that the relatively common consequences described in the middle column are most appropriate, and there are many times that the less common consequences described in the right column are completely inappropriate. But to the extent that teachers can sometimes make use of humorous responses, they may interrupt the problem behavior in a non-punishing way, spare targeted peers the need to respond, and refine the humor repertoires of their students.

Relatively flexible, generous criteria may increase the likelihood that others’ smiles/laughs come to function as reinforcers. Perhaps many of our students would value smiles/laughs, but have not yet learned how to elicit them within the constraints of “appropriate” behavior?

Distinguishing which types of consequences may be appropriate at any given time can be very difficult, more art than science. But it is clear that humorous responses would be worse than useless for a student already aroused to the level of yelling, crying, aggression, or property destruction.

### ***But then won’t he joke all the time?***

Yes, he might for a while, and this resembles typical development of a multitude of behaviors (e.g., asking “why” questions). Student humor demonstrated at excessive levels, while perhaps an unavoidable phase, is a challenge that ultimately needs to be addressed. But humor should not be suppressed prematurely.

I’ve worked with numerous teams who have avoided interactions that tended to evoke smiles/laughs, either because behaviors associated with those signs of happiness were historically demonstrated at excessive rates or because the magnitude of associated behaviors tended to increase to inappropriate (or even unsafe) levels. Their decisions not to encourage smiling/laughing are, in one sense, reasonable. They were interrupting behavior chains that frequently terminated in problem behavior. But, what are you going to do, never have fun with your students?

Behavior analysts have increasingly recognized the need to gradually decrease the efficiency of (e.g., Fisher, Piazza, Cataldo, Harrell, Jefferson, & Conner,

1993; Lalli, Casey, and Kates, 1995) or establish stimulus control over (e.g., Hanley, Iwata, & Thompson, 2001) mands occurring at excessive levels. Similarly, when a student is demonstrating “humorous” behaviors at inappropriate times, at excessive rates, or in inappropriate ways, we have a number of intervention options.

One treatment option is to use a multiple schedule, such as used by Fisher, Kuhn, and Thompson (1998) to bring mands under stimulus control. In a multiple schedule, teachers create alternating conditions...one in which reinforcement is available for a particular type of response and another in which reinforcement is unavailable. Supplemental stimuli, such as the black and white cards employed by Fisher, et al (1998), facilitate the development of stimulus control. We may be vulnerable to attack when wearing a particular hat and invulnerable when not wearing that hat, for example. Or, for a more mature example, we may be unavailable for humor while we are recording data and may be available when we are not recording data.

Another treatment option is to increase the response requirement for our student by introducing chained schedules of reinforcement (Fisher, et al, 1993). Fisher, et al, (1993) decreased the rate of student mands by requiring a little bit of effort before a mand opportunity, then a little more effort, and so on. We could mirror that by initially reinforcing jokes, then requiring a student to request our attention before having the opportunity to joke, then requiring him to request the necessary props from a second teacher before requesting our attention and having the opportunity to joke.

We may also decrease levels of excessive joking by imposing delays, such as used by Hagopian, Fisher, Sullivan, Acquisto, & LeBlanc, (1998) to decrease excessive

mand levels. We could accomplish this in a relatively natural manner by having a parent/teacher appear busy when a student mands their attention to tell a joke. The parent/teacher could sometimes provide immediate attention while indicating that they have to “finish \_\_\_\_\_” before they can talk with the student.

We can use excessive levels of joking to expand upon joke variety by using a lag schedule of reinforcement (e.g., Lee, McComas, & Jawor, 2002). When using a lag schedule of reinforcement, each response is reinforced only if it is different than the response that preceded it. For example, we may initially demonstrate exaggerated dismay when a student “bites our finger” with a plastic dinosaur. Once “dinosaur biting” is occurring at a high rate, we may stop responding...we have grown immune to dinosaur bites. But a toy bird “pooping on our head” would really be devastating. Once “bird pooping” is occurring at a high rate, we might grow immune, waiting for another novel type of response before reinforcing. Lag schedules can have the dual benefits of improving variety/creativity (critical aspects of humor) *and* of decreasing the efficiency of excessive joking, in general.

For some learners who start to joke too frequently, we can simply tell them that a specific joke has become “boring”, or that it is not time to joke right now. Or we can simply demonstrate less interest in the joke.

In any case, the behavioral process will likely take some time, and this process requires some “failures” (i.e., excessive, inappropriate, or ill-timed humor). Temporary excesses of behaviors targeted for decrease should not be interpreted as indications that the behavioral process isn’t working.



### ***Aggressive examples of joking with our students***

Art is 5 years old, has been completely toilet trained for more than a year, and has a delayed, but adequate, verbal repertoire. He told his teacher he needed to go to the bathroom, but since she was engaged in conversation with another teacher, she did not immediately respond. Within 15 seconds, Art was on his knees with his head on the floor, and was probably just about to start whining. So, naturally, I asked, “do you need a diaper?” with a big smile on my face. After a 3-4 second latency, Art looked up at me and smiled. I asked whether he really needed to use the bathroom and suggested that he ask his teacher again, which he did successfully.

Why did Art smile? Wasn't he already “vulnerable” before the aggressive diaper joke? Apart from someone saying, “let's go to the bathroom”, most forms of attention would likely have evoked whining. Planned ignoring would have likely resulted in whining, or worse. I will revisit these questions after another student example.

“Don't worry...as long as you beat the timer, I won't kick you in the butt”. Counter-intuitively, I said this to a student who was panicking, avoiding a “beat-the-clock” program (Ward, 2013) for apparent fear of failure. Adding a “threat” would seem to be the opposite of helpful, right? So, the student's immediate laughter and his subsequent multiple attempts to write quickly enough to beat the timer support the notion that the student “understood” this was a joke.

Why did these aggressive jokes, levied at vulnerable students, evoke smiles instead of tears? For one thing, each student demonstrated prerequisite repertoires (e.g., finding humor in less aggressive examples, appreciation of smiles, etc) necessary to

make their responses possible. And, there was an absence of subtle stimuli historically preceding the onset of punishers. And, stimuli historically preceding the onset of reinforcers, which also very rarely precede the onset of punishers, were present. In English, I'm sure the smile on my face helped a lot.

Loosely speaking, I think that well timed, especially somewhat aggressive, jokes are “disarming”. I think the stress associated with the fear of failure is mitigated. I speculate that these jokes altered the contexts...that it was no longer a question of whether a student would fail to earn something for which an MO was currently in effect. It was no longer about “embarrassment” or “shame” that may have sometimes accompanied previous failures. The “beat-the-clock” program was now associated with a potentially funny interaction contingent upon “failure” in addition to the potential positive reinforcers typically available for success.

More tightly speaking, the reflexive conditioned motivating operation (CMO-R) (Laraway, Snyckerski, Michael, & Poling, 2003), the typical function of the presentation of a daunting task, typically evokes escape/avoidance behaviors. Those behaviors are sometimes inadvertently or unavoidably reinforced and future escape/avoidance behaviors further impede desensitization opportunities. Defensive, escape/avoidance behaviors may be reinforced too frequently relative to escape contingent upon task completion (DNRA), (Vollmer, Roane, Ringdahl & Marcus, 1999), and relative to potential positive reinforcers contingent upon task completion. In addition to, and sometimes even in replacement of, common interventions such as demand fading (e.g., Pace, Iwata, Cowdery, Andree & McIntyre, 1993) and errorless teaching (Touchette & Howard,

1984), humor can abolish the CMO-R, sometimes by establishing the value of an interaction incompatible with anxiety. Before the introduction of humorous stimuli, a variety of stimuli establish their own removal as a form of reinforcement. And stimuli associated with the removal of these stimuli (e.g., a worried or frustrated teacher) can function as conditioned reinforcers. Well-timed humor can function as an abolishing operation for these events.

### ***Research: Assessing the value of humor***

Of course, none of the case descriptions included in this article demonstrate a functional relation between humor and improvements in relevant behaviors, though it is reasonable to suspect relations. It is reasonable to speculate that humorous interactions are more effective as reinforcers than non-humorous interactions, at least for some learners. I have certainly known 100's of learners who would prefer to see me humorously feign exasperation instead of hearing me say "good job". Most of my older, "cooler" students would much rather hear me say, "that's not as bad as I've come to expect from you" than "well done". The former tends to function as a reinforcer for task completion without being interpreted as patronizing.

There are several ways that we can formally assess the potential value of humor. We can identify an arbitrary response form (e.g., pushing a toggle switch) that allows a student to choose his intervention package (Catania, 1992), employing humor in only one of the intervention packages.

We can select a non-arbitrary response form with which a student chooses his intervention, such as by dividing a room with a line of tape (Dube, MacDonald, Mansfield, Holcomb, and Ahern, 2005) and

providing treatment packages differentiated only by the in/exclusion of humor.

We can, during intervention stages, provide a potentially humorous consequence to an arbitrary behavior occurring at a very low rate during baseline. Holth, Vandbakk, Finstad, Gronnerud, Sorenson (2009), for example, increased the level at which a student touched the inside of a circle with his index finger by following this behavior with smiles and nods, after those social stimuli had been conditioned as reinforcers.

Short of conducting formal reinforcer assessments (e.g., DeLeon & Iwata, 1996), we can observe students during free time and speculate that "funny" events sometimes function as reinforcers. Students don't frequently turn off a show that is making them laugh, and if their sister's response to teasing makes them smile, they are likely to continue teasing. That teasing may not be funny to us, but "humor is in the glands of the beholder".

Though not experimentally controlled, many clinicians have created interaction histories resembling the following. While initiating play with Roby, I donned an oversized sombrero and "warned" him not to wake me. Within 5-10 seconds of exaggerated snoring, he woke me and I responded with dramatic dismay and feigned revenge. In this case, there were plenty of fun materials and familiar people in the area (i.e., a concurrent schedule of reinforcement), and Roby quickly woke me each time the opportunity was available, finally stopping when I said I was going to stay awake and I put the sombrero away. If interested in extending this into research, researchers could alternate between potentially "boring" responses and potentially humorous responses to being "woken". Researchers could subsequently select different responses upon which "boring" and "humorous" responses were made con-

tingent. Subsequently, researchers could probably measure the emergence of joint attention responses following the development of humor as a reinforcer, especially when that humor employs props, like the over-sized sombrero.

Perhaps most difficult is the prospect of creating an operational definition of “humor”. We can create formal descriptions of smiling (e.g., “extends the corners of the mouth to the sides without making noise”), though people also tend to smile concurrent with a variety of non-humorous positive reinforcers (e.g., the good news that your poem has been selected for inclusion in a book).

For an additional research challenge, “humorous” behaviors may need to vary in order to remain humorous. You might have to “keep your material fresh”, and this probably can’t be formally operationalized. A description of stimuli deemed humorous, if held constant, may produce decreasing effects, potentially masking the effects of humor.

### *Cautions and Recommendations*

Of course you have to avoid crossing lines that are deemed inappropriate by secondary consumers (e.g., parents, school personnel, etc).

Also, don’t use humor most frequently as a consequence of problem behavior. While that may occasionally be appropriate, it also may reinforce problem behavior. While an experienced teacher may accurately distinguish between appropriate and inappropriate occasions, a less-experienced teacher is more likely to over-apply recommended tactics. As such, the risk of listing “humor” as an intervention following problem behaviors likely outweighs the benefit of doing so. Rather, it may be appropriate to

list more traditional consequences for a number of clearly defined student behaviors and to model humorous reactions to a number of other, less problematic, student behaviors. Remember that, beyond a moderate level of arousal, students become non-responsive to verbal input, especially if complex. Humor is ineffective in those situations, as well.

In the most difficult cases, it may be necessary to assign more experienced teachers to a particular student for a relatively long period of time. This is true whether or not you’re trying to gradually shape student humor and responsiveness to limits placed upon that humor.

Humor will likely be less effective when unnaturally “harnessed”, such as through a system in which a student exchanges 5 tokens to hear a joke. This fact is consistent with the Matching Law (Herrnstein, 1961), which states that the relative frequency of a behavior is dependent upon the effort required and frequency of reinforcement in comparison with the effort required and frequency of reinforcement concurrently available for other behaviors. It is generally more effective to introduce humor during downtime or preferred activities, as the behaviors upon which humor is contingent require minimal effort.

That said, humor *can* be effective during stressful interactions, such as a beat-the-clock contingency with a non-preferred task. In those contexts, though, humor tends to be less effective when strictly contingent upon “success”. Perhaps a student will respond with great effort if the quality of the humor is very high (e.g., “if you beat the timer, I’ll help you trick Ms. Megan into sitting on a Whoopi Cushion”).

But I’ve more frequently found it useful to employ more flexible “contingencies”. For example, I may humorously insult perfor-

mance on an initial, failed, attempt. I may humorously “threaten” what will happen if a student fails to beat the clock, leaving open the option of feigning that consequence for failure. I may feign dismay if the student beats the clock, as this means that I do not get to assault or mock the student. I may therefore categorize his successful task completion as “selfish”. I may take a turn attempting to beat the clock on that non-preferred activity and I may model a ridiculously inadequate performance and, again, feign dismay. Or I may easily beat the clock while exaggerating the panic with which I race, celebrating either by “wiping the sweat from my brow” or by exaggerated celebration (e.g., donning a “Championship Belt”, loudly high fiving everyone in sight, or “taking a victory lap”).

The point of describing this variety of examples is that flexibility tends to be important, and the use of relatively rigid contingencies can easily undermine the values of humor. It would be difficult and probably beside the point to analyze how humor might function as a reinforcer or a motivating operation in each of the examples above. But the humor described in each of those examples, and more, has certainly led to smiles/laughs and improved the qualities of student participation with hundreds of students.

### **Summary**

As behavioral technology evolves, and especially as scripted recommendations are increasingly disseminated, it is easy to forget about subjective, potentially important, qualities of behavioral interventions. When we are working with human beings, we should treat them as such. When attempting to reinforce a response, several subjective qualities, such as teacher “attitude”, may impact efficacy. Though I

have used “humor” as an example in this article, “sincerity” can be equally relevant. If you can’t fake that, you don’t have anything.

Humor may be a directly relevant aspect of a behavior intervention plan, such as when a proportion of student behavior can be interpreted as “funny”, rather than “inappropriate” and when we improve the quality of reinforcement by incorporating humor. Student attempts at humor needn’t be extinguished, and can frequently be shaped into increasingly valid social interactions. Teacher humor frequently increases the efficacy of socially mediated reinforcement.

Humor may be of indirect relevance within a behavior intervention plan. For example, students happily sharing humorous exchanges with others may be more likely to appreciate attention, in general, and that attention can be used to shape a variety of repertoires decreasing the need for and/or incompatible with, problem behavior.

Humor can enrich social interactions and relationships, and the field of behavior analysis can make gains in social validity and efficacy by acknowledging this fact. We should at least consider whether certain interventions, for a particular individual, might inappropriately suppress humor. Better yet, we should consider whether a particular individual might benefit from our introduction of humor.

### **References**

- Catania, A. C. (1992). *Learning*. Englewood Cliffs, NJ: Prentice Hall.
- DeLeon, I.G. and Iwata, B.A. (1996). Evaluation of a multiple-stimulus presentation format for assessing reinforcer preferences. *Journal of Applied Behavior Analysis*, 29, 519-533.

- Dube, W.V., MacDonald, R.P.F., Mansfield, R.C., Holcomb, W.L., and Ahern, W.H. (2005). Toward a behavioral analysis of joint attention. *The Behavior Analyst*, 27, 2, 197-208.
- Fisher, W., Piazza, C., Cataldo, M., Harrell, R., Jefferson, G., & Conner, R. (1993). Functional communication training with and without extinction and punishment. *Journal of Applied Behavior Analysis*, 26, 23-36. doi: 10.1901/jaba.1993.26-23
- Fisher, W. W., Kuhn, D. E., & Thompson, R. H. (1998). Establishing discriminative control of responding using functional and alternative reinforcers during functional communication training. *Journal of Applied Behavior Analysis*, 31, 543-560. doi: 10.1901/jaba.1998.31-543
- Hanley, G. P., Iwata, B. A., & Thompson, R. H. (2001). Reinforcement schedule thinning following treatment with functional communication training. *Journal of Applied Behavior Analysis*, 4, 17-38.
- Hagopian, L. P., Fisher, W. W., Sullivan, M. T., Acquistio, J., & LeBlanc, L. A. (1998). Effectiveness of functional communication training with and without extinction and punishment: A summary of 21 inpatient cases. *Journal of Applied Behavior Analysis*, 31, 211-235. doi: 10.1901/jaba.1998.31-211
- Holth, P., Vandbakk, M., Fintad, J., Gronnerud, E.M., & Sorenson, J.M.A. (2009). *An operant analysis of joint attention and the establishment of conditioned social reinforcers*. *European Journal of Behavior Analysis*, 10, 143-158.
- Horner, R.H., Day, H.M., Sprague, J.R., O'Brien, M, & Heathfield, L.T. (1991). Interspersed requests: A non-aversive procedure for reducing aggression and self-injury during instruction. *Journal of Applied Behavior Analysis*, 24, 265-278.
- Herrnstein, R.J. (1961). Relative and absolutely strength of response as a function of frequency of reinforcement. *Journal of the Experimental Analysis of Behavior*, 4, 267-272.
- Laraway, S., Snyckerski, S., Michael, J., & Poling, A. (2003). Motivating operations and terms to describe them: Some further refinements. *Journal of Applied Behavior Analysis*, 36, 407-414.
- Lee, R., McComas, J.J., & Jawor, J. (2002). The effects of differential and lag reinforcement schedules on varied verbal responding by individuals with autism. *Journal of Applied Behavior Analysis*, 35, 391-402.
- McGhee, P. E. (1984). Play, incongruity and humor. In T. D. Yawkey, & A. D. Pellegrini (Eds.), *Childs play: Developmental and applied* (pp. 219-236). Mahwah, NJ: Lawrence Erlbaum Associates.
- Mundy, P., Sigman, M., & Kasari, C. (1994). Joint attention, developmental level, and symptom presentation in autism. *Development and Psychopathology*, 6, 389-401.
- Pace, G. M., Iwata, B. A., Cowdery, G. E., Andree, P. J., & McIntyre, T. (1993). Stimulus (instructional) fading during extinction of self-injurious escape behavior. *Journal of Applied Behavior Analysis*, 26, 205-212.
- Piazza, C.C., Bowman, L.G., Contrucci, S.A., Delia, M.D., Adelinis, J.D., & Goh, H. (1999). An Evaluation of the Properties of Attention as Reinforcement for Destructive and Appropriate Behavior, *Journal of Applied Behavior Analysis*, 32, 437-449.
- Skinner, B.F., (1953). *Science and Human Behavior*. New York: MacMillan.

Sidman, M. (1989). *Coercion and its fallout*. Authors Cooperative, Inc.

Smaby, K., MacDonald, R.P.F., Ahearn, W.H., & Dube, W.V. (2007). Assessment protocol for identifying preferred social consequences. *Behavioral Interventions*, 22, 311-318.

Touchette, P. E., & Howard, J. S. (1984). Errorless learning: Reinforcement contingencies and stimulus control transfer in delayed prompting. *Journal of Applied Behavior Analysis*, 17, 175–188.

Vollmer, T. R., Roane, H. S., Ringdahl, J. E., & Marcus, B. A. (1999). Evaluating

treatment challenges with differential reinforcement of alternative behavior. *Journal of Applied Behavior Analysis*, 32, 9-23.

Ward, S. (2013). *Teaching Good Learner Repertoires*, Lulu

Winston, M. (2012). *Adventures in Special Education*. Merrill Winston.

Wolf, MM. (1978). Social Validity: the case for subjective measurement or how applied behavior analysis is finding its heart. *Journal of Applied Behavior Analysis*. Summer; 11(2): 203-214