

Shock Collar Experiments – Experiment Nr. 2

Carried out: Sornetan, Switzerland, Saturday, June 23, 2012
by Leonard Cecil

The background information

The first shock experiment¹ which we carried out on May 12th, 2012, showed that different people experienced shock in different ways, strengths and had different tolerances when experienced on various parts of their bodies. There was however no attempt to correlate this information to training situations and of course each subject knew exactly when the shock was coming and could physically and emotionally prepare him-/herself for that shock. Also the subject could at any point stop the experiment.

Of course this first experiment did not set as it's goal, to study how shock effects subjects in terms of learning. It's only purpose was to establish how the shock was perceived within the above confines of the experiment – as a purely subjective but scalable experience. Once again, the question as to why use human subjects, when these are dog shock collars is a valid one. The answers are:

- 1) dogs cannot -tell- us, how they experience shock
- 2) dogs cannot volunteer for such experiments and we believe it's only ethical to use volunteers
- 3) with the exception of dogs not being able to sweat, there are no significant physiological difference between dogs and humans that would need to be taken into account, when analyzing either the subjective data or the videos which showed things such as involuntary muscle movements or facial expressions/avoidance motions exhibited by subjects before, during and/or after the application of shock.

What was shown however was the unpredictability of the individual reactions to shock. In other words, no two subjects reacted in the same way to the shock physically. This therefore discounted any generalizations used by pro- or anti-shock collar advocates.

The questions to be examined in the current experiment:

- 1) Based upon observations, how did the subjects react to the shock?
- 2) Did they understand how and what they were being trained for?
- 3) Did they show any overt signs of discomfort, emotional stress?
- 4) Did they show any signs of accomplishment, satisfaction
- 5) Was there a difference in how shock was perceived and tolerated between simply trying out the shock (Experiment 1) and actually having it used beyond their own control in a training situation over a period of time?
- 6) How did they, after the fact, explain how and what they were feeling during and after the training session? Did this correspond to what was seen in the video?

¹ Experiment Nr. 1 <http://www.auf-den-hund-gekommen.net/-/experiment1.html>

The Experiment

There is not just one method of using a shock collar, there are several. Some use shock collars purely to punish dogs who either misbehave or do not comply. They may also use the shock to interrupt potentially unwanted behaviors when they assume the dog will present them – for example to NOT chase a squirrel. As a general label, we can call such training methods punishment based, using so-called “positive punishment²”. This type of learning is called *avoidance training*³, in that the subjects learn to avoid the aversive stimulus by not doing certain behaviors.

Although often explained in users' handbooks from shock collar companies⁴, only a very few trainers will pair the sound capabilities of the collar with the shock, making this sound a *conditioned secondary punisher*. This means, that as a general rule, when the sound is sent and heard by the dog, it marks the behavior that will be punished by the shock, which is then delivered after this tone. This is similar to the conditioning of the clicker, which itself marks the behavior that will be reinforced. We will not be testing this, since this is a classically established (conditioned) punisher and classically conditioned stimuli need time to be truly conditioned – a time frame that we do not have. Also, while some shock trainers do use this, and in a rather curious manner in that while conditioned, if the dog then does “conform” and stops the undesired behavior as a result of hearing the tone, they do NOT follow through with the shock. I was informed that the vast majority of trainers do not use shock as a conditioned secondary punisher, ie as a “warning to shape up or you'll get it”.

Another method of using shock is based upon “negative reinforcement (-R)⁵”. This is often used to optimize certain behaviors once they have been learned. For example making a recall more certain or faster. It entails giving continuously sent shocks, either before or right after having given the command and continuing to give these until the behavior has been successfully completed, at which time the shock is stopped as the reward for compliance with the command. This is called *escape training*⁶.

What is rather unusual with shock trainers is the use of food or play on a per-behavior basis as a reinforcement. Often, when a set of behaviors has been successfully navigated by the dog, they will throw a ball or play tug. But they will not as a general rule pair a successful compliance to a command with an immediate reward. So we will not either. We will give a vocal confirmation of a successfully completed behavior, which still depending upon the recipient of the vocal confirmation (praise) actually finds it reinforcing.

However once the experiment started, which was at the moment the shock collar was attached to the subject, the tester only spoke in a language unfamiliar to the subject – Turkish in this case. This meant, that the subject didn't know that this vocal confirmation (praise), could be considered a reinforcer and the tester also did not -know- if the subject perceived that as reinforcing. So there was -perhaps- an element of “positive reinforcement⁷” or +R involved.

Now that we'd established what methods we wanted to use, we needed to establish what behaviors

2 According to B.F. Skinner's operant quadrants, “positive” means adding stimulus after a behavior (as opposed to “negative” which means taking one away) and punishment is a stimulus decreases the occurrence of a behavior. Reinforcement on the other hand is a stimulus that increases the occurrence of a behavior.

For a concise discussion of operant conditioning and the four quadrants including extinction see http://en.wikipedia.org/wiki/Operant_conditioning

3 http://en.wikipedia.org/wiki/Operant_conditioning#Avoidance_learning

4 PetSafe PDLDT-305 Deluxe Remote Trainer, page 5 “To train using tone”

5 negative reinforcement (-R) = the removal of an aversive stimulus upon successful completion of a desired behavior such that the probability the desired behavior is repeated is increased.

6 http://en.wikipedia.org/wiki/Operant_conditioning “Negative reinforcement (Escape): occurs when a behavior (response) is followed by the removal of an aversive stimulus, thereby increasing that behavior's frequency. In the Skinner box experiment, negative reinforcement can be a loud noise continuously sounding inside the rat's cage until it engages in the target behavior, such as pressing a lever, upon which the loud noise is removed.”

7 See footnote 2 above

we wanted to teach and train using these methods as well as which methods we'd use for each behavior:

- 1) learn name
- 2) (name⁸) come
- 3) (name) stay
- 4) (name) sit
- 5) (name) go to chair/sit/stay
- 6) (name) go to specific chair
- 7) (name) take the pencil
- 8) (name) put pencil in cup

The Turkish vocabulary being used is:

English	Turkish	Phonetic pronunciation
1) subject's's name:	Shadow = <i>Gölge</i>	(Goelge)
2) come	<i>gel bereya</i>	
3) good	<i>iyi</i>	(iye)
4) stop	<i>durdurmak</i>	(durdurmak)
5) sit	<i>otur</i>	(otursh)
6) stay	<i>kalmak</i>	(kalmak)
7) blue chair	<i>mavi sandalye</i>	(maa(v)i sandayeah)
8) red chair	<i>kirmizi sandalye</i>	(kermeze sandayeah)
9) table	<i>masa</i>	(musa)
10) go to (blue chair)	<i>git (mavi sandalye ye git)</i>	(maavi sandayeah yeah git)
11) take (something)	<i>al</i>	(ale)
12) bring (something)	<i>getir</i>	(geetisch)
13) cup	<i>kupa</i>	(kupa)
14) pencil	<i>kalem</i>	(k'lem)
15) put down	<i>koy</i>	(koy)
16) put (pencil) in cup	<i>kalemi (kupaya koy)</i>	

It should be pointed out, that none of the subjects spoke or understood Turkish although one guessed it might have been Turkish because he'd worked with Turks in the past. In any case, the accuracy of the language or pronunciation was irrelevant, just as it actually is in training with dogs, since they don't understand the intricacies of any human language.

There was also a situation provoked in which someone from the training center (the “helper”) interrupts our experiment and starts clearing away the table and chair. The subject was given the command to sit and then the command again to put the pencils into the cup. Since this put the subject into a conflict between obeying the tester and co-operating with the helper's work, this mimics a training session being interrupted by a strange person or dog or represents another “dog” provoking “misbehavior” in the eyes of the owner. The only acceptable behavior will be, at first the subject remaining with the table and continuing with the pencils, which is impossible without

8 (name) – usually the subjects “dog” name was used to proceed the actual command, but not always

intervention by the subject, which itself is an unwanted behavior.

Each training session was conducted for a maximum of 10 minutes. The collar was put on each subject's neck according to instruction from the PetSafe manual⁹. Taking the results from the first experiment, the shock was set at a maximum of level 2, in as much as this was less than half of what all could tolerate when the collar was on their necks. While the collar was being fitted, each subject was given an emergency cut-off word to say, if they felt they could no longer participate. This was important, because the experience showed in the first experiment, that some people seemed to experience a great deal of pain, yet were ready and able to continue. Others showed no outwardly reaction to pain/discomfort, nor did they show any end-point of their own tolerance for this pain/discomfort until they suddenly said, that that was enough.

After the completion of the 10 minutes or the planned behaviors, whichever came first, there was a short interview. The subject was asked the following questions, which in themselves constitute a basis for the basic questions this experiment poses as listed above. Inasmuch as the subjects were all either Germans or German speaking Swiss, the interview was conducted in German. Therefore I've included a summary translation of the questions as posed in in German during the interview. In the raw data section I also provide a summary translation of the answers given.

- 1) Please explain the training procedure as you understood it. (*Bitte erklären Sie mir, wie und für was trainiert wurde*)
- 2) Please identify any reinforcers used. (*Welche Bestärker wurden dabei eingesetzt?*)
- 3) Please identify under what conditions you received shock. (*Unter welchen Bedingungen haben sie einen Stromschlag bekommen?*)
- 4) Did you always understand what the trainer wanted of you? Was this due to the trainer's methods, language, facial expression/bodily posture or other – please elaborate. (*Haben Sie immer verstanden, was der Trainer wollte? Ist das ggf. Klar geworden durch die Methodik, die Sprache, Gesichtsausdrucke, Körperhaltung oder sonst was – bitte erklären.*)
- 5) Did you at any time feel happiness or satisfaction during training? Please explain. (*Haben Sie sich während des Trainings fröhlich oder zufrieden gefühlt? Wenn ja, wann?*)
- 6) Did you at any time feel fear during the training? Please explain. (*Haben Sie sich je während des Trainings gefürchtet? Wenn ja, wann und warum?*)
- 7) Did you at any time feel frustration during the training? Please explain. (*Waren Sie zu irgendeinem Zeitpunkt während des Trainings frustriert? Wenn ja, weshalb? Bitte erklären*)
- 8) Did you at any time feel anger during the training? Please explain. (*Haben Sie während des Trainings je Wut gespürt? Wenn ja, weshalb?*)
- 9) How did you perceive the shocks themselves? Did they seem of different levels or the same levels? If different levels, under what circumstances were they different? (*Wie haben Sie die Stromschläge erlebt? Blieben sie immer gleich stark/schwach? Falls unterschiedlich, unter welchen Umständen waren sie "anders"?*)
- 10) If you completed the entire 10 minute training period, how long could you have continued training in the same manner? (*Angenommen, Sie haben die 10-minutige Session überstanden, wie lange hätten Sie noch so weiter trainieren können?*) N.B: all did finish the training objectives under the allotted time and no one broke off the training early.
- 11) If you broke off the training session before the end of the 10 minutes, please explain why. (*Wenn Sie das Training frühzeitig abgebrochen hatten, bitte erklären Sie warum.*) N.B: no one felt the need to break-off the training early.

12) Would you take part in a third and last Shock Collar experiment in August 2012? (*Wären Sie bereit, im August 2012 am letzten Experiment teilzunehmen?*)

13) Extraneous comments – (sonstige Kommentare)

Each subject's training session was filmed by a colleague who kept the subject in the camera frame during training. The interview after the experiment was also filmed. These videos were intended to be viewed and analyzed by a trained psychologist who would comment based upon observations both during the training sessions and the interviews of the emotional content of body position, facial expressions. Unfortunately through series of happenstances, none of the three psychologists I had contacted, could actually take part as desired and in a timely manner, so that I will be doing this analysis myself. **I therefore ask, that any qualified psychologist interested in also submitting their comments on the video, please submit these together with their qualifications and they will, where applicable, be included in an addenda.**

Dogs convey to each other and also to us, certain intentions by use of their body language, also know as “Calming Signals”, a term we've come to associate with the work by Ms. Turid Rugaas¹⁰. Scientists have concerned themselves with human body language going back to Charles Darwin's “The Expressions of the Emotions in Man and Animals” (1872). Many of these are common knowledge and there are various sources readily available which can be consulted in determining some or all of the bodily postures shown, for example:

<http://suite101.com/article/political-body-language-a71450>

http://changingminds.org/techniques/body/emotional_body.htm

http://changingminds.org/explanations/emotions/facial_emotions.htm

I have also placed the video material on-line which can be found here:

<http://www.youtube.com/watch?v=y4nQVGvuj1E>

The Results

While reviewing the video material, attention was paid to facial expressions, body posturing, any vocalization made by the subjects, both during the “training” and during the interviews. In the Appendix you will find the raw data consisting of the comments of what was observed observed and in (parenthesis) and speculations as to what these could actually be reflecting. Of course, while the observations are objective, you see what is there, the interpretation, even amongst “experts” is going to be a matter of discussion. It was therefore necessary to get the structured reactions of the subjects. **Spoiler alert:** the answers of the subjects did not always correspond to what one sees in the training sessions.

First I will discuss the results of the filmed training sessions.

When viewing the films, there are several things that are noticeable in almost all cases – for specifics, please refer to the protocol of the raw data in Addenda:

- 1) When new commands are given, more signs of stress, tension and/or fear were clearly visible. These ranges from not looking at the tester, stiff upper torso position. Unnatural positions of arms and hands as compared to normal gaits and stances. There was however a wide variance between the subjects of what postures where exhibited in this stress reactive situation
- 2) When however the subject felt, that he/she had understood what was expected from the tester as per command issued, at least the large-motor actions became more fluid.

10 Rugaas, Turid “On Talking Terms With Dogs: Calming Signals” 2nd Edition (2005), Dogwise Publishing

- 3) Several also did react with apparent relief to the praise word “iyi” as shown by slight smiles, eye contact, letting go of held breathe.
- 4) However ... when the continuous -R shocks where then applied, these often brought this new-found confidence or partial confidence to full or partial standstills – literally, since the subjects were usually moving from the one chair to the other. And when the shock starts, they hesitated or stopped their forward movement.
- 5) The videos often showed, that the subjects did not or could not understand from words alone, what was expected. It's often clear, that the body position of the tester, combined with gesticulations and repeating of the commands lead to a deduction as to what was expected, but ...
- 6) this deduction was not always correct. For example there was great confusion between the commands “come to me” where ever the tester was and the command “go to the red/blue chair”.
- 7) There were surprisingly very few visual or vocal expressions of frustration or anger, although this was experienced, albeit not uniformly.
- 8) Several subjects exhibited general discomfort wearing the receiver collar, which is understandable, since it has two metal contacts which need to exert a certain pressure into the flesh in order to hold their position. This is no different than with a dog.
- 9) While a couple of subjects did take back the chair and/or the table, it was not obvious in any case, that there was anything more than a desire to continue with the commanded jobs. There did not seem to be any overt aggression or signs of anger, aggression at this moment, neither towards the helper, nor the tester who was administering not continuous but still repeated shocks until the subject resumed working. Only in one case was there a hint of anger or frustration, but one could not tell at whom it was directed. More often, there was simply an attempt to stop the shocks by being able to continue working.

Now we get to the results of the interviews, question by question.

- 1) When asked to identify what the subjects were being tested for, no one mentioned that they were being trained for name recognition, their own “dog name” = Gölge, the very first thing.
- 2) When asked to identify the types of praise almost all identified praise as a reinforcer, some identified the purpose of the repeated shocks was to speed up performance, but the concept of negative reinforcement was not identified (see conclusions below)
- 3) When asked to identify when and why they received shock, most could explain the positive punishment (+P) aspect, almost no one correctly and completely identified the negative reinforcement strategy, in which shock was given until the behavior was successfully completed, counting upon the subject understanding, that by doing so faster, the shock would be stopped faster – thus “escaping” the shock. The part they didn't identify was, that for having completed the task quicker, that the shock would stop quicker as their **reward**.
- 4) Almost no one understood the words/commands used, although a couple said they were trying to work them out. More useful were the gestures.
- 5) A couple of people expressed feelings of mild satisfaction when they had the feeling they knew what was expected and could and/or did fulfill the expectations of the tester. Some claimed to not have experienced any happiness or satisfaction, but rather relief. It was rather difficult to be ale to tell only though the video if satisfaction, happiness or relief. Some

claimed to have felt neither, but there were physical changes to their facial expression and/or body positions that could have indicated some basic release of tension/stress for whatever reason.

- 6) While only a couple expressed fear during the experiment and when this was the case, it was of the shocks, not of the tester's person, others said they did not experience this, but it's difficult to come to another conclusion when looking at the video for the body tension or facial expressions shown.
- 7) Basically the same situation as with question 6.
- 8) Only one person expressed anger and that was not directed at the tester who was administering the shocks, but rather at the "helper" who started to take away the chair and table. This was however not absolutely clear on the video, just a hint through a slightly tensed mouth during this part.
- 9) Most found the shocks to be of the same strength, although a couple did say they were stronger later than in the beginning. The remote sender was set to Nr. 2 of 10 levels, meaning rather low. It was not changed at any time from this setting. This level was at least 50% or less than what the same subject had tolerated during Experiment 1 at this position on the neck. [There could be several reasons for this. For example that they repositioned the receiver so that there was a better skin contact. Or they started to sweat, which have helped conduct the electricity more efficiently. Or they were better able to tolerate the first single corrective +P type shocks than the continuously repeated -R type shocks. That unfortunately was not within the scope of this experiment to be able to determine. Another factor could have been, that the shock seem different, either stronger if the subject has no control over when and how often they are administered, as opposed to the Experiment 1, where the subjects administered the shocks to themselves AND new, that it would only be the one time, not for an extended period of time as in this experiment.]
- 10) All did actually complete the entire training program in less than the allotted 10 minutes. No one broke off the trials early although one person was tempted to do so. A couple said they could have continued for a couple more minutes [showing that they were reaching the end of their tolerance also, but not with the same immediacy]. Others said they could have gone on for "a while".
- 11) Not applicable, since no one broke off the trials early.
- 12) All would have participated in a further experiment, if one could have been arranged.
- 13) Various comments. One person found that the shocks lost prominence if she could concentrate on the job at hand. This however did not correspond to what is recognizable in the video [so I can only conclude, that what she mentally tolerated was disconnected to what and how she physically reacted to the shocks. This corresponds to what we observed in Experiment 1]

One went so far as to say he liked it, although the way he said it and his amused demeanor made it uncertain if this was the case or if he was making a joke.

Another comment how it was interesting to see how praise could have a positive effect on the training even if the dog or in this case the subject didn't exactly know what the praise word meant. And still another commented, that everyone should experience training in this manner to see how it effects such a training subject.

Conclusions

- 1) The technique of *escape training*¹¹ (-R), meaning being rewarded for accelerated performance through the stopping of shocks when the behavior was completed was recognized, but the stopping of the shocks was not listed as reinforcing. This meant, the subjects did not actually find this stopping to be rewarding in any conscious manner.
- 2) The subjects in this experiment reacted both physically and emotionally to the shocks. Whereas a dog may also give certain “Calming Signals” during shock based training, we tend either to not notice this or not take this into consideration. With humans, since we are more familiar with these reactions, we do notice them. The physical reactions depended, as in Experiment 1, upon the individual tolerance level for the shocks received. We have here a base-line of the level which is what is called in the industry the “working level”
- 3) The subjects did not always understand what they were being trained for. We're not here to discuss basic methodology and certainly not linguistics. The only factor we need to look at in this context was, if the use of shock helped or hindered the learning process. Here there is enough evidence, at least within the constraints of this experiment to suggest, that the introduction of escape training (-R) after having used +P methods to signal undesired or wrong trials in the learning process did have a confusing effect upon learning. When the subjects had learned that shock=punishment, even after a behavior had been learned such that doing it incorrectly was no longer punished and instead rewarded, with one exception, in all cases, the introduction of -R training had the opposite effect than that that was desired. It either slowed (instead of speeding up) performance or even broke down the previously trained behavior. This indicates, that at least in this respect, the subjects did not understand the process. [What is unclear is, if this would have “rectified” itself, given enough time for the subject to have had more experience with this concept, that the stopping of the shock is meant to reward better, faster performance. Ethical consideration however prohibited carrying on this experiment in a longer time frame, as several subjects indicated that would not have been prepared to have continued with the experiment much longer.]
- 4) It was also clear that the subjects not only experienced physical discomfort during training, but were also experiencing emotional discomfort due to the threat of and actual anticipation of receiving shock. This was clearly seen in the various physical (facial, body posture, gait) manifestations of these emotional states, even if this was not always evident in the answers during the interview. I'm sure, this phenomenon has already been researched.
- 5) In spite of the stress, it was also obvious, that the completion of the tasks successfully was met with the appropriate emotions – not extreme, but very visible, even if also not always reflected in the interview answers.
- 6) As we saw in Experiment 1, different people experience shock and show this experience differently. This Experiment 2 confirms this and shows its physical manifestations during the training sessions. What we still cannot answer conclusively but can only deduce is, that while people could tolerate higher levels of shock when administering them to themselves, they experienced this slightly differently when they were not in control. Thus the question as to how much longer they could have gone on with the training.

11 See footnote 6

Thanks

Much thanks go to Claudia Moser for the use of her excellent training facility in Sornetan, Switzerland, to both Claudia and Simone Fasel for letting me recruit the volunteers from their course. I'd also like to thank the 6 volunteer subjects who are amongst those course participants and kitchen personnel for their help and courage, as well as Claudia herself for taking part as a subject.

Additionally I'd like to thank Ms. Lauren E. Bertonazzi, (Lindenwold, NJ) who is a former shock trainer and was very generous in her time reviewing my first experiment as well as giving me important suggestions as to how to structure this experiment, using which training techniques.

Also many thanks to Dr. Meltem Sancak, Ethnological Seminar, University of Zürich for her help in supplying most of the Turkish vocabulary used in this experiment. She did NOT however coach me on my pronunciation, so cannot be held responsible for my bad diction/pronunciation.

Appendix – raw data:

Key:

- 1) observations are written in normal typeface
- 2) (words in parenthesis) are explanations or relevant comments
- 3) [words in brackets] are suppositions and conclusions based upon observations an interview feedback

Anytime the personal pronoun “I” is used, we have a more or less direct quotation. The personal pronoun “he” or “she” denotes generally a summary, to make the entry more concise without changing the content.

Observations Subject 1

- 1) 1':21” – the subject laughs, smiles but doesn't necessarily seem amused. She will also not look directly at the trainer, but only with quick, fleeting glances - bodily position Nr. 3. [Could this be an attempt not to provoke more +P shocks for doing the undesired behavior?] The tester even moved quickly into her line of sight and then out to attract specific attention.
- 2) 1':47” – subject seems to have a rather stiff body standing position while the tester is moving away to set up the next command.
- 3) 2':15” – the subject is holding her breathe after having reached the chair, until the tester says the “good” (iyi) praise and moves away. This seems to be a tension release (relief) point.
- 4) 2':34” – not the first time, but the subject when sitting down, extends the hands to the front with them resting on the inside of the thighs. This seems to be a rather stiff and unnatural position. This raises the shoulders slightly and there is a fair amount of tension in the lower arms when sitting in this position. On the other hand, there doesn't seem to be tension in the facial expression, [so I'm wondering if this is an unconscious tension outlet.]
- 5) 2':58” – again, the faint smile with the “good” praise word.
- 6) 2':34” – while testing the “come here”, the subject is standing, again with a rather still body position, the hands hanging down to the sides, but the shoulders relatively high, showing this stiffness. This is a result of the punishment given because she misunderstood the command to mean “go to the chair” and was punished until she came back to the test. [So now it would appear this has made her uncertain as to what is expected.]
- 7) 6':29” – as opposed to sitting on the chair by itself, while sitting on the chair at the table, she has now placed her hands over each other which can have a meaning of uncertainty. She does appear to be a bit more relaxed.
- 8) 7':21” – a small smile came together with application of the shock for the misunderstood command to go to the blue chair. The bodily motions directly after this are once again rather fast and stiff. [The conclusion I draw here is, that the smile is not out of amusement, but rather “sorry, I'll try that again”.]
- 9) 7':52 – a rather “disturbed” looking look at the tester as the helper starts to clean up. Definite uncertainty as to what's going on and how she, the subject should act/react. It's only as the actions of the “helper” become bluntly physical, that the subject reacts with amusement, [I would guess that she realizes, that at this point it's arranged.]

Interview Subject 1 (see list of question in **The Experiment** part above):

Question 1: Answer: With the exception of having to learn her dog-name, she understood what was expected and proceeded to name the expected behaviors.

Question 2: Answer: praise (This means she didn't recognize the stopping of the shock in -R situations was a reward.)

Question 3: Answer: If I did something stupid. (asked for further explanation) If I did something wrong or too late. (This shows, that she didn't really understand the purpose of the -R shock sequences. The shock were not meant to speed reaction, but rather speed the performance of the behavior.)

Question 4: Answer: No, but it became clearer as she learned what the "trainer" wanted through the trainers bodily position and language.

Question 5: Answer: I became more and more happy once I'd understood what was expected. (At this point a big smile!)

Question 6: Answer: a little bit, because she'd be punished when she didn't understand something.

Question 7: Answer: no

Question 8: Answer: no

Question 9: Answer: she experienced the shocks as relatively weak because she was concentrating on the job at hand

Question 10: Answer: long

Question 11: Answer: (NA = not applicable)

Question 12: Answer: yes

Comments: It's remarkable how unimportant the shocks themselves became when one could concentrate on the job itself. [This however didn't exactly correspond to what we saw – there were times when she did show trepidation about the possibility of getting a shock for not having understood, which would tend to belie what she just said to a point. And confirm it at the same time. As long as it's going ok, she was not worried about getting the shock, but she was worried when she was uncertain about what to do.]

Observations Subject 2

- 1) 12':45" – subject is not turning to face the tester when the tester moves away. Afraid of provoking a shock?
- 2) 13':14" – as opposed to subject 1, this subject's body carriage as well as his position while sitting is much more relaxed. When walking, the arms swing in a much more natural manner. He is however seemingly avoiding looking directly at the tester at the end of the execution of a behavior.
- 3) 13':37" – at the first application of the -R shock being administered, the subject stops dead in his tracks until the command is re-issued, indicating, he didn't understand this application of the shock.
- 4) 13':53 – the next issued command after having completed the last one above is performed at a very high speed, indicating now, that he is complying at a high speed – to avoid getting more shock? Again, at completion of the commands, the subject does not look at the tester –

if at all, only when the tester moves away with his back turned to the subject.

- 5) 14':57 – a second quick readjustment of the receiver. It would appear, that the receiver is causing some discomfort itself, independent of any shocks being administered.
- 6) 15':45" – Subject is now confused by the different between the commands to "come here" and "go to the red chair". He is being shocked for non-compliance, which doesn't seem to help the situation. These are not continuous shocks, but rather +P single shocks. The subject doesn't not at this point appear to react so much to the oral commands as he does to the physical gestures.
- 7) 16':13" – Although the subject seem rather tense during the commands are given, the hand position on the legs, which is very relaxed, especially compared to subject one, would indicate a sense of security at having reached a place of non-shock. Relief, happiness?
- 8) 16':30" – after completing the command with almost exaggerated praise, there is a slight smile on the subjects face AND he's actually looking directly at the tester. And raised eyebrows at the issuing of the next command could indicate even an anticipation of being able to fulfill the required next command.
- 9) 17':29" – as opposed to the beginning of the session, the subject is now actually turning towards the tester immediately after the completion of the command. This could be interpreted as being less apprehensive about the coming command
- 10) 18':25" – Now seated, the subject does not relax his hands after having taken 4 pencils from the tester, when the tester takes the pencils back. A curious tensing again, one would think that if relaxed, the subject would let the hands relaxed fall back to the table.
- 11) 18':42" – a new variation of the command "take the pencil" with the "helper" entering the room to start clearing off the table, the subject now can not look at either the tester or directly at the helper. He seems to be implicitly trying not to acknowledge either.
- 12) 19':12" – as the "helper" drags away the table, it's interesting to note, that now the subject does not try to get back the table from the "helper" but instead now looks at the tester. This is however not completely directly. He is keeping his head level and only looking upwards with his eyes, which gives another impression – perhaps one of asking "what can I do?" – speculation, but possible.

Interview Subject 2 (see list of question in **The Experiment part above):**

Question 1: that one needs to learn the different commands. (No more specific than that)

Question 2: Answer: eye contact (the subject did not then understand, that the "good" word – *iyi* was meant as praise.) (This means he didn't recognize the stopping of the shock in -R situations was a reward.)

Question 3: Answer: if I was too slow or did the wrong thing (so this subject did seem to understand the concept of escape training, but not the "rewarding" aspect, BUT this does not bear out with the video, [so it could be, that this is a conclusion drawn towards the end of the session or even as the question was being asked, but not necessarily during the session.])

Question 4: Answer: I understood through the body position what was expected, once it wasn't when I had to go between chairs, but otherwise it was fairly clear.

Question 5: Answer: I felt satisfied after I'd completed the command successfully.

Question 6: Answer: yes, that I might do something wrong.

Question 7: Answer: no

Question 8: Answer: no

Question 9: Answer: I think they were always of the same intensity, but I can't say for sure.

Question 10: Answer: very much longer

Question 11: Answer: NA

Question 12: Answer: yes

Comments: It was good, I liked it.

Observations Subject 3

- 1) 22':29" – as with the others, only fleeting glances at the tester. The smile could be construed to be embarrassment, disarming?
- 2) 22':40" – a slight jerk of the head. It's not clear, if this was physical reaction to a shock for not obeying OR perhaps the outwardly expression of confusion as to what the tester wanted.
- 3) 22':48" – steps towards the chair are tentative, uncertain, as opposed to
- 4) 22':05" – where the body seems fairly relaxed, arms swinging freely. The subject is still not looking directly at the tester. While sitting in the chair before moving off, approx. 22':00", the subject seemed more relaxed than in the beginning. She's leaning back with her back resting on the back of the chair. One foot slightly and more naturally in front of the other and the hands are resting relaxed in her lap along her thighs (as opposed to the position of subject 1). her shoulders are also relaxed and hanging low.
- 5) 23':09" – At the command to wait, which is new, the uncertainty returns. She doesn't follow the tester directly as he moved off, stayed frozen in place and only looked at the tester, when he'd stopped moving.
- 6) To 23':26" – again, familiar commands that end in the same relaxed body position. It's difficult to know exactly what the smile at this point signifies, because it's almost always in one intensity or another present.
- 7) 23':52" – the test obviously had started a -R chain of shocks to speed up compliance, this however brought the subject to a stop. They obviously had, at least with this trial the opposite effect of slowing down an previously very fluid and well understood execution of the command. This shows, that this -R strategy was not understood. The subject did not understand, that she could stop the shock by simply increasing her speed to the end-position.
- 8) 24':10" – while waiting for the next cue sitting on the chair, she is now tenser. She's leaning forward and the smile is gone. Perhaps the smile before indicated, something like "This isn't so bad, I get this" whereas that feeling is now gone. The command had been the same, she'd started to react in the same manner but got shocked. So now she's uncertain what the problem was and what is now coming.
- 9) 24':17" – again, during the application of the continued shock, there was hesitation in her steps, but this time not a complete stop.
- 10) 24':26" – I saw a slight nod of the head after brushing the hair aside. There seemed to be a hint of questioning, as if asking what this is about (meaning this continued shock), since no other information is coming that came before.
- 11) 24':34" - now there is definite hesitation and reluctance to move despite repeated commands

for a behavior that had worked well before starting this -R phase. This looks like a complete breakdown of the behavior. But then she did move and move fluidly to the other chair.

- 12) 25':01" – now waiting for the next command, the subject's upper body looks much more tense, she raised the shoulders and bunched them together towards the middle and she's sitting now leaning forward. No smile. At the next command, again, hesitation
- 13) 25':47" – after having introduced "go to the blue chair" and "go to the "red chair", the tester proofed "come to me" twice: once while standing next to a chair and once standing between them. The uncertainty is clearly visible on body tension and facial expression, head angled slightly down and glance all over but only dartingly towards the tester.
- 14) 26':15" – it's clear, that the subject does NOT understand the spoken cues, but only understands the intention in conjunction with the physical prompts of the tester – ie moving to the targeted chair. At this point I would say, that the -R trials did actually destroy the behavior that had been learned before as well as the subject's readiness to try something, inasmuch as the subject is now only moving with help of repeated commands and positional prompting from the tester.
- 15) 26':36" – although the subject is standing right next to the tester and the tester has turned to look at her and speak directly to her, she is not looking at the tester. I'm not sure if this is a result of the shocks before or if this subject does not feel comfortable at that close proximity to others (males) that she can look at him. In any case, I think discomfort here is a factor.
- 16) 27':05 – Same position AFTER the successful executing of a "recall" to the new position and repeated recall. NOW the subject can look the tester in the eye at close quarters, so I assume that it was the uncertainty of not understanding what was expected with Nr. 15 above that led to the not wanting eye contact.
- 17) 27':40" – a couple more rapid fire repeats of the various commands and successful executions. Now the smile returned and the subject is sitting a little more relaxed.
- 18) 28':15" – upon hearing the command to put the pencils into the cup and doing so with the praise, there is a rather satisfied smile on the subject.
- 19) 28':21" - once again, the subject could look the tester directly in the eyes while getting the command to put the pencil in the cup.
- 20) 28':40" – the subject doesn't know how to react to the "helper" coming in to "clean up". The smile is back, but I think she's caught on quickly that this is an artificial situation.

Interview Subject 3 (see list of question in The Experiment part above):

Question 1: I identified more or less the different commands with the exception of having to learn her name.

Question 2: Answer: praise (This means she didn't recognize the stopping of the shock in -R situations was a reward.)

Question 3: Answer: for wrong behavior, she correctly identified, that she was punished for not going faster. (although as we saw, this was not reflected in her actual performance – she actually went slower and more carefully)

Question 4: Answer: it wasn't always clear what the trainer wanted, but it became clearer through the tester's body language

Question 5: Answer: not really because the shocks were not pleasant.

Question 6: Answer: no

Question 7: Answer: yes (no further information as to when and why)

Question 8: Answer: yes (no further information as to when and why)

Question 9: Answer: I felt shorter and longer shocks (different lengths, but actually they are all the same length, but of course during -R, they were repeated, but no actually longer).

Question 10: Answer: Because the shock was pretty uncomfortable, that was about it as far as the time was concerned.

Question 11: NA

Question 12: Answer: yes

Comments: none

Observations Subject 4

- 1) 33':07" – Subject moved rather haltingly towards the chair and even upon arrival there was very tense in her body postions. Her hands are raised in contact with her hair [comfort or not daring to put them somewhere else?]. She also remained in the position in which she arrived at the chair and did not turn towards the tester as he moved away – trepidation?
- 2) 30':28" – subject needed some slight prompting to come right to the chair. Her hands remained in contact with her hair and her steps towards the other chair seemed rather tense in that there were no arm movements together with the steps (compare to subject 3). Once the tester moved off to his next position, the subject remained frozen in her end position, but showed a facial expression of puzzlement [still trying to work out what the individual words meant?]
- 3) 33':36" – at the administration of the -R shocks (falsely labeled in the films as singular), there was a slight waver in her progress towards the chair.. Arm position still tense and still holding hair.
- 4) 33':48" – for the first time she let go of her hair, although her body position on the chair is not very relaxed. The right shoulder is held higher than the left and the arms are supporting the upper body though holding onto the thighs – not clasping, but rather not sliding. Sitting forward on the chair. So the relaxation is only slight.
- 5) 33':55" – the onset of the -R shocks was clear to see in the facial expression and utterance, but also the interruption of the fluid movement towards the other chair. She did however then pick up the tempo, accelerating to the other chair. Taking her place on the chair, she was not relaxed, if at all a bit less than before. The hand position on the thigh does not seem natural at all. They are not really supporting the upper body, but it is also relatively rigid.
- 6) 34':08 – (the shocks in -R sequences are started directly after having given the command, which is how they are supposed to be started, ie command and immediately shocks, which continue until the end of the desired behavior.) Upon hearing the command, the subject starts to race out of the sitting position towards the other chair, but in this split second, the -R shocks start which stop her almost dead. (so, although the button was pushed at the correct timing point, we have no idea if the first shock was delivered, or was not delivered, but only the next ones, OR if the subject felt the first ones but could not react to them at first, but did to the next ones.)
- 7) 34':22" – another look of [puzzlement?].
- 8) 34':34" – as noted in the film comment, now the application of -R shocks seems to have the opposite effect, that of slowing down the behavior. This would indicate that the concept of

being able to escape the shock through moving faster to the end point of the behavior is not clear.

- 9) 34':50" – again, the -R shock did not accelerate the motion AND it was clear, that the subject did not understand the command to mean "come to me", but rather "go to the chair". This shows how tentative the learning process is.
- 10) 35':50" – She's done the command "go to the blue chair" well and came back to the tester well. Now once again given the command to go once again to the blue chair, she does not go immediately to the chair. [is this the onset of the situation in which the subject now doesn't dare to try a behavior when uncertain if it's the correct one?]. Given the command "come to me" she returns to the tester immediately without hesitation. This would indicate, that she now understands this command. The third try to go to the chair is not as hesitant as the last, but still slow [and the subject is prepared to stop if necessary].
- 11) 36':18" – now that she'd showed, that she understood the command, -R shocks were applied to "go to the blue chair". These also stopped her progress to the chair. The next time, they didn't, although her gait was a little "wooden".
- 12) 37':45" – the subject was given a shock so that she didn't sit down on the red chair without the command to sit. Then right after, she was given the command to go to the blue chair, a command she "knows". And she sat down again, which got her another shock. Her movement to the blue chair was faster, but still a bit hesitant.
- 13) 39':00" – New commands sitting at the table and she too could not look at the tester until she'd done several repetitions of the same job.
- 14) 39':28" – As the "helper" takes away her chair, she shows a bit of confusion, but does sit back down on the chair where it'd been removed to. And she did try to move the chair back to a position where she could continue. As the helper dragged the table away, the subject continued to try to complete the command, but did not really pay attention to the helper.

Interview Subject 4 (see list of question in **The Experiment** part above):

Question 1: she identified more or less the different commands with the exception of having to learn her name.

Question 2: Answer: a word (praise) (This means she didn't recognize the stopping of the shock in -R situations was a reward.)

Question 3: Answer: when I did something wrong or looked away. (she did not mention the -R aspect of getting shock to encourage her to move faster to the end point of the behavior – ie escape the shock by completing the task faster)

Question 4: Answer: in the beginning I only understood what was going on through the tester's body language. Later I tried to learn the words.

Question 5: Answer: no, more tense (although she did often show a small smile after the successful completion of a command)

Question 6: Answer: no

Question 7: Answer: now again, for example when she was walk to the tester between the chairs and she thought she was doing it correctly and in spite of that getting shocks.

Question 8: Answer: no

Question 9: Answer: I had the feeling sometimes only having received one shock, sometimes many in series. (But she was not able to identify why the difference. The

difference being that one was to stop an unwanted behavior, many in series were the -R usage.)

Question 10: maybe another 5 minutes, not necessarily because of the pain, but because the situation was uncomfortable.

Question 11: NA

Question 12: Answer: yes

Comments: no (Her sitting position at the table was much more relaxed than during the session. She did tend though to play with her hands which would signal a basic feeling of discomfort. She also showed to a higher degree discomfort when getting the shocks with slight vocalizations and facial expressions, but she also said, that it wasn't the pain of the shock that would have limited her further participation in that session to another 5 minutes. She was also more able to look directly at the tester, only looking away while formulating her answers. She seemed more comfortable with the tester's presence when she knew, that no more punishments were coming.)

Observations Subject 5

- 1) 44':15" – subject is, although smiling, very obviously nervous. Once he seems to understand the command to "come to me", he almost runs, although very stiffly to the chair. [Seems rather over-eager OR perhaps already afraid of the shock].
- 2) 44':43" – in a similar manner as Subject 4, this subject in a stiff, tense manner walks from one position to the other with his hands clasped at the end of downwardly extend arms. He also avoided eye contact with the tester until he arrived at the chair. Once seated, he's very tense, leaning forward, with his hands still clasped together, this time between his legs [what kind of assumption can be made about that position?]. He's so nervous/stressed, that he dries his hands on his shorts and then puts them back into this original position.
- 3) 45':08 – he starts out seemingly a little more relaxed and speeds into the chair position.
- 4) 46':07" – After a little confusion about what "Shadow" means and what "sit" means, he's now given the command to "come to me", which he'd done well, this time with the -R for speed shocks. These however, like other subjects bring him to a stop, he turns sideways [to avoid them?] before continuing towards the chair, but slower, more carefully. So these -R for speed, as with some of the other subjects did not accelerate his performance, at least in this trial.
- 5) 46':49" – The tester is now standing between the chairs and calls the subject to "come to me". As with the other subjects, this seems to confuse the subject who needs repeated commands to know whether it means to go to the chair or the testers. The body position is once again tense, hands clasped in front. Once at the tester, as with the others, he does not look directly at the tester and his body is still very tense. Once given the new command to go to the blue chair, he shows that he doesn't understand it with head nodding, as if he's trying to work out each word.
- 6) 47':55" – The subject has pretty much worked out what the commands are for the different chairs, but he's still very tense. There is no real sign with him of relief, that he knows what's expected of him.
- 7) 49':06" – -R was used rather sparingly with this subject, but one sees immediately when the shock is used. In this case, it was used to accelerate the return to the tester, which it didn't. It had the same effect, that is in stopping the behavior, as it did at 48':56", where it was used to stop him from coming to the tester.

- 8) 51:04" – during the entire section of the “helper” first taking the chair and then the table, the subject made no attempt to “defend” his working place. He was instead literally frozen in place, staring straight ahead, neither looking at the tester nor the helper. (Learned helplessness? Or possibly too afraid to do something for fear of setting off the shocks again?)

Interview Subject 5 (see list of question in **The Experiment** part above):

Question 1: he identified more or less the different commands with the exception of having to learn his name.

Question 2: Answer: (it took him an extremely long time to think about it, but he did eventually say “praise”. This means he didn't recognize the stopping of the shock in -R situations was a reward.)

Question 3: Answer: when he did something wrong and [!] before he did something good. (This means, he did not understand the purpose of the -R shocks, ie to accelerate his performance.)

Question 4: Answer: because of the stress I sometimes confused the intentions of the trainer. I even didn't always understand the praise word “iyi” to be praise, thought it was a command.

Question 5: Answer: Not really happy or satisfied, but rather relieved when the shock stopped. [I suppose some would consider “relief” to be a form of reward immediately after the shock, but in this case, it did not actually increase the quality of performance of the command, so it doesn't fulfill the definition of a reinforcer or the purpose of -R consequence]

Question 6: Answer: yes, I was always afraid of receiving the shock. And he became more and more fearful to approach the trainer. (Perhaps because he thought that would cause another shock?)

Question 7: Answer: yes, because he thought he'd done something correctly and in spite of that got a shock, but it disappeared when he was finished with the command. He didn't understand why that should be and that frustrated him.

Question 8: Answer: He didn't really think about the feeling, but he would have liked to have taken away the remote.

Question 9: Answer: There was a difference if I got a shock while breathing in or breathing out and I felt a large difference between the two.

Question 10: Answer: I wouldn't have -wanted- to continue with these shocks, but I could have survived it for a long time.

Question 11: NA

Question 12: Answer: yes (but he didn't appear to be really happy about it).

Comments: no

Observations Subject 6

- 1) 56':06" – Here the subject had no idea what the words meant and so tried something, picking up an object from the table. This was of course punished with a single shock (+P). The tester then just said the name and praised for the eye contact. That seemed to work [if she understood the praise word actually as praise].
- 2) 56':42" – once she received the command to come, she walked with a rather confident stride to where the tester was standing and, as opposed to other subjects did actually look directly at the tester. This could even be understood according to the list as being rather "threatening". [Not sure if threatening so much as confident, especially in combination with the manner of walking to the chair.]
- 3) 57':00" – also in this case, the -R shocks broke the stride just a bit. The body position was not quite as relaxed as before, with the hands clasped in front of the body. Once the subject arrived at the chair, just as the tester moved away, she looked at him with another facial expression. (This expression is difficult to exactly describe, but I would say, it was not neutral. This could even have been slightly threatening in nature) When turning around a slight lift of the eye brow – again an outwardly expression of an inner emotion, but difficult to specifically know what, and combined with a smile that I do not understand as a reflection of amusement. The hands are still clasped in front of the body in a tense manner.
- 4) 57':14" – the subject misunderstood the command "wait" for meaning "sit" and of course got a +P shock to stop this sitting. The reaction was also rather clear [if I had to guess, exasperation at having gotten a shock for not understanding what was expected]
- 5) 57':47" – Interestingly, the subject got -R shocks when starting off from the one chair to the other and she did accelerate, without slowing because of the shocks. I also did not see and outwardly sign of the shock nor of any underlying emotions, as opposed to the beginning, where the shocks were new [had she "gotten used to them" in the manner of accepting their existence and not being able to affect a change in them except to get them to stop through performing faster? If so, this would indicate if not an acceptance of the shocks at least of the situation in which the shocks occurs, where her outwardly reaction before where perhaps more resistant to both the shocks and the situation.]
- 6) 58':06" – the subject once again is looking very intensely at the tester while trying to work out the new command to go to the blue chair. (She looks perplexed and that shade of resistance is back.) Interesting, that the subject goes backwards to the blue chair. And only looks away from the tester to check her relative position to the chair.
- 7) 58':32" – a nervous laughing as we drill the commands "come to me" and "go to the blue chair". [Could this have been a slight release of the tension, her arms are no longer clasped in front of her, but rather to her sides and moving between the sides and the front_] When she gets the new command to go to the red chair, she seemed to have gotten that right away and also to wait for instruction there, if she should sit. While she still didn't let the tester out of her sight, she seemed a little more relaxed.
- 8) 59':20" – relaxed enough now to relax her shoulders and let her arms swing in a more natural manner while walking from the blue to red chair.
- 9) 1:00':32" – Th subject went to grab a pencil while in a training flow of grabbing the pencils, was a little too fast and went to grab a pencil before the tester cold give the cue, stopped. (I think this was a sign, that she was relaxed with this part of the training, as there had been no shocks given and it was pretty easy for her to work out. So the stopping was self-regulating.) And she actually seemed to then smile. (a smile that was completely different than the stressed smile, as if this was fun.)
- 10) 1:1':16" – when the "helper" came to take away the chair, she stood up and was stopped

with a shock. With eyes opened more largely than before, she snatched the chair back and sat back down. Her facial expression got a bit “hard” at that point and she only glanced once to the tester, where she had looked at him a lot before the helper came. As the helper dragged the table away, the subject snatched it back rather forcefully, clenching her mouth together in the process.

Interview Subject 6 (see list of question in **The Experiment** part above):

Question 1: she identified pretty exactly the different commands with the exception of having to learn her name.

Question 2: Answer: non-conditioned praise word (pretty exactly defined)

Question 3: Answer: she identified both the +P, which wasn't always clear what was wrong, and -R aspects of the training. She added, that if she'd been a dog, she wouldn't have come with the -R tactic.

Question 4: Answer: most was made clear through the body language and the repeating of the commands. Then the pairing of the body language/gestures with the word, although she didn't understand the language itself.

Question 5: Answer: more uncertain, but not constantly

Question 6: Answer: yes, continually that a shock would be delivered.

Question 7: Answer: yes, especially where she had to walk between the chairs and the shock came. She understood that to mean, that she had to walk faster. Also when she was punished because the helper took the chair away.

Question 8: Answer: yes, in that situation where she politely gave up the chair to the helper.

Question 9: Answer: the shocks were always the same strength. The first was a little less, but then was adjusted and they stayed the same (no, the setting remained the same at Nr. 2 the entire time)

Question 10: not much longer. Maybe another minute maximum. This was because she didn't know when she could trust the trainer, why she'd be punished for doing it correctly, like going from chair to chair. (This means also, that she did not actually recognize the rewarding part of the stopping of the shock at the end of the correct behavior as rewarding, but instead always felt the shock as punishing)

Question 11: NA

Question 12: Answer: yes, even though it's very uncomfortable for her.

Comments: It was a very interesting experience because, even if we work positively with our dogs, when we say things like “super, mousy” the dog can really understand what that really means. She learns eventually, that that's has a positively meaning. She found it very interesting to experience because she too uses praise in her training to see how that helped to understand what was expected.

Observations Subject 7

- 1) 1:09':24” – Subject has a slight smile as she reaches for an article on the table as response to tester's command. [I would judge this to be to an extent a rather testy smile rather than strictly amused.] She continues apparently to test the tester's responses to see what brings a positive response, for example for looking at the tester or looking at the table. It would also appear, that her response to the name “Shadow” by looking at the tester and then looking

away is also a test of what that is. She's responding apparently to the vocal quality of the praise word "iyi" at 1:09:59"

- 2) 1:10:47" – The subject has now "trained" the tester to split the name "Shadow" from the action "Come to me" and is. (Of course the subject is herself an experienced trainer and so is training the trainer, despite the shocks)
- 3) 1:11:31" – as with the other subjects, the first instance of -R cause a stutter. This is a different reaction to the previous trial, in which the subject simply stopped moving and continued with the praise/repeat of command. Here we see her duck partly to the side as the shock is administered. Her body position is however rather tense, shoulders stiff, hands clasped in front of her body instead of naturally hanging and swinging loosely. At the moment of shock, a slight change in facial expression, lifting of eyebrow as response to the sensation.
- 4) 1:11:45 – as a response now to the -R shocks administered right after the command, subject does accelerate towards the other chair, this time without the physical reaction to shocks [already habituation?]
- 5) 1:12:03" – the change of tester's position in relation to the command given shows that the subject did not correctly understand the actual meaning of the command "come to me", understanding it to mean "go to chair". She now tries short actions to see if punished or rewarded. Using a process of elimination. She is however not only not being rewarded for the wrong choice, she is receiving single +P shocks to stop the unwanted behavior. [This raises the question though. Punishment is only punishment, when the unwanted behavior is as a result of the aversive stimulus reduced. Was it reduced? The propensity to try different solutions is for the moment – the actual undesired behavior, as she "knows" the proper response – continues.]
- 6) 01:12:29" – once again the sideways physical response to the -R shocks which caused not only this motion but also a vocal utterance. She says "Disgusting" referring to the -R shocks she received. No adjustment of the shock level had been done.
- 7) 1:13:00" – the +P shocks are causing more obvious responses [as cumulative effect – perhaps showing that tolerance over time can diminish?] After these shocks, although the hands now are hanging at her side, she is no longer smiling.
- 8) 1:14:06" – the subject sat in an extremely tentative and stiff manner onto the chair. The hands are at her sides, but did not move in the least as she contacted the chair (I had the impression, she was preparing to spring up, if a shock came as a result of her sitting).
- 9) 1:16:14" – during the entire pencil section, the subject very concentrated on the "jobs". She rarely looked directly at the tester. When the helper came, she looked neither at the tester, not at the helper. As the helper took the chair away, she simply took it back after the helper had let go of it. Also when the helper took the table away, she showed no overt actions against the helper, concentrating instead upon staying with the table to be able to continue the "job" - this of course helped avoid the expected shocks for not complying with the command. She also do not look at the tester.

Interview Subject 7 (see list of question in **The Experiment part above):**

Question 1: She identified only partly correctly what was being trained. She thought she had to walk backwards. While she did seem to recognize that there was a difference between coming to the tester and going to a chair, she did not actually demonstrate this understanding very well. She was not certain if at some point she should go faster (the -R shocks while either coming to the tester or going to a chair). She did exactly understand continuing with the commanded job in spite of the distraction by the helper.

Question 2: Answer: “yes” and that she was allowed to continue to “work”.

Question 3: Answer: It wasn't completely clear. Sometimes because she did the wrong thing, other times perhaps because she should go faster, but it wasn't clear when what was.

Question 4: Answer: no. Gestures helped, but she wasn't sure if all the the gestures were really honestly [accurately?] given. It wasn't clear, if she should react to the gestures or not.

Question 5: Answer: no (but she reacted with an amused laugh)

Question 6: Answer: yes. When something new was presented through a command because she knew she'd make a mistake

Question 7: Answer: no, not frustrated but rather uncertainty. It wasn't so much that she wanted to accomplish something, which could have caused frustration, but rather that she wanted to avoid the shocks.

Question 8: Answer: yes, because she didn't understand why she should get shocks for something she thought she'd done correctly and didn't understand what she needed to do in order that it be correct. (this contradicts to a certain point the answer above in which she said, that she did not wish to accomplish something. Here it would appear, that she is connecting the accomplishing of the expected behavior with results of getting or not getting the shocks. I wonder how close these two actually are to each other in her perspective.)

Question 9: Answer: The shocks were different (emphasis on WERE). She had the feeling that if she made a mistake, that the levels were increased, but she couldn't make out why. (this was not the case, the remote was set to level 2 and remained there. This could perhaps be a result of varying consistent skin contact.) She felt that towards the end, where she was tenser, she experienced the shocks more intensely.

Question 10: not much longer. Not much longer. There was a moment during the test where she felt she'd had enough, but certainly not much longer as she already had tolerated.

Question 11: NA

Question 12: Answer: (with a laugh) Depends what the test would involve, yes.

Comments: Everyone should experience this so that they can see how one is effected, how the other could feel.