

Effect of eye gaze and phone use on dogs' obedience: Participant study protocol

1. Purpose:

The aim of this study is to investigate how well dogs respond to commands under different degrees of human attention:

Dogs have become closely associated with humans through domestication, allowing them to develop an impressive sensitivity to human communicative signals. In human-dog communication, a handler gives a cue (e.g. a command to "sit") to which their dog responds (e.g. by sitting down). However, how well dogs can follow our cues depends on different factors. When humans speak to each other, eye contact indicates that we are paying attention to them. Similarly, when humans speak to dogs, whether we are looking at them may influence a dog's perception of our speech and whether the dog decides to perform the command.

This study aims to examine the extent to which attention, specifically through eye contact, is important for obedience to these commands in regular pet dogs. Specifically, does being distracted, such as by texting on a mobile phone, influence dogs' obedience when they're told to sit or lie down?

2. Materials:

- Mobile phone
- Magazine
- Video recording device with microphone (e.g. smartphone or camera, you will need this in addition to the mobile!)
- High value treats, e.g. cheese or hot dog

3. Attention level conditions

You will give your dog two different commands, "sit" and "down" / "lie down" and will reward the dog when they perform them correctly every time. So if the dog obeys, they get a treat every time. This treat should be something they really like and are happy to get.

For consistency, you should perform familiar hand gestures throughout and use "dog's name" + "command" format when giving commands, i.e. "Sheba, sit" and "Sheba, lie down".

There are 5 conditions, covering 5 different degrees of attention:

A) No phone, interacting with the dog like normal. There should be nothing in your hands during this condition.

B) Holding the phone in your dominant hand, but looking at the dog while giving the commands and not texting or typing.

C) Texting on your phone using your dominant hand only, leaving your non-dominant hand free to give hand signals. You should not make any eye contact with the dog at all. You should give the commands while typing your typical weekly shopping list into your phone. We want your attention to be on the phone not the dog while giving the commands.

D) Holding a novel with your dominant hand but looking at the dog while giving the commands.

E) Holding the paperback novel in your dominant hand, leaving your other hand free for hand signalling. You should give the commands while reading the magazine and not making any eye contact with the dog at all.

F) Repeat of A so: No phone, interacting with the dog like normal. There should be nothing in your hands.

We'd like you to ask the dog to obey the commands "Sit" and "Down" or "Lie down" three times in each condition A-F. If you normally use a marker like "yes" or a clicker, please use it in the trials. If you don't, please give another form of vocal praise when giving the treat, such as "good boy/girl".

4. Methods

The recording device must be angled to show the human, dog, and surrounding floorspace. If this is not possible using one camera, a second camera should be used with one focusing on the human, and one focusing on the dog and the floor.

Set up your video camera or phone camera to record you and the dog so that your face, hands and their entire body can be seen, even in a down. At the start of each video, please say your dog's name clearly so we know who we're watching.

You should always start with the dog in a stand. Then give the command word once. Wait 10s for your dog to respond. Treat as soon as they do it, even if it takes them 10s. You should keep the treats in your pocket or a pouch, rather than holding them as you'll need your hands to perform gestures or hold objects.

IMPORTANT: Please only give the command word once for each trial.

If after 10s, the dog still hasn't performed the behaviour, then move onto the next trial. We're interested in whether they follow commands when you're distracted, so don't worry that they are "failing" to perform - they are telling us something interesting about how they think!

After 10s, please move onto the next trial, getting the dog back into a stand.

We will give you a testing order for giving the commands. Please keep this the same throughout, so if you say "sit, down, down, sit, sit, down" it is the same across all conditions.

If your dog does the sit or down behaviour before you've asked them to do it, please get them to stand and try again. It's important that they do it in response to you asking them rather than a natural offering or prediction.

For example:

1. The camera is recording your actions
2. You say dog's name for the camera
3. You stand holding a book
4. Dog is standing
5. You say "[Dog's Name], Down"
6. Dog lies down
7. You reward Dog with a treat
8. You put Dog back into a stand
9. You say "[Dog's Name], Sit"
10. Dog sits
11. You reward Dog with a treat
12. You put Dog back into a stand
13. You say "[Dog's Name], Sit"
14. Dog ignores you, so you wait 10s then move onto the next trial without giving a treat
15. You say "[Dog's Name], Down"

16. Dog lies down
17. You reward Dog with a treat
18. Etc.

You can see an example video of trials in each condition at [www.animals.technology/...](http://www.animals.technology/)

Please keep to the set-up and do not take your hands off the phone or magazine or look at your dog if you're looking at your phone or the magazine. If you do this by accident, e.g. drop the magazine or stop looking at it to look at your dog, please start that trial again.

You will need at least 36 treats as you'll need to give one treat each time they correctly perform the behaviour. These should be "high value" to your dog so that they don't get bored of them. We'd suggest small pieces of cheese, cooked chicken, or hot dogs.

5. Uploading your videos

When you have finished all the trials, please upload the videos you have recorded to [www.\[placeholder-text\].com](http://www.[placeholder-text].com) along with the completed questionnaire form.

Files should be labelled "Dog'sName_Breed_Day_TrialNumber" so we know which dog is which.

If you don't feel confident in renaming the files, just send an email to Alice Torjussen at at459@sussex.ac.uk letting her know which ones are yours.

The study should take less than 30 minutes to complete in total, spread across 6 or more days.