

# Hard-to-find classics 7: Jones (1924)

## Reference

Jones MC (1924) A laboratory study of fear: ]  
The case of Peter. Pedagogical Seminary, 31: 308-315.

## Introduction

Mary Cover-Jones studied several children to investigate the best way to remove fear responses in children. This was important as Watson & Rayner (1920) had demonstrated that a fear could be produced experimentally in a child (little Albert) but, although they had planned to remove his phobia of rats using classical conditioning, he was taken away before this could happen.

## Aim

1. To investigate whether a phobia in a child could be deconditioned.
2. To demonstrate whether deconditioning would generalise to other objects.

## Procedure

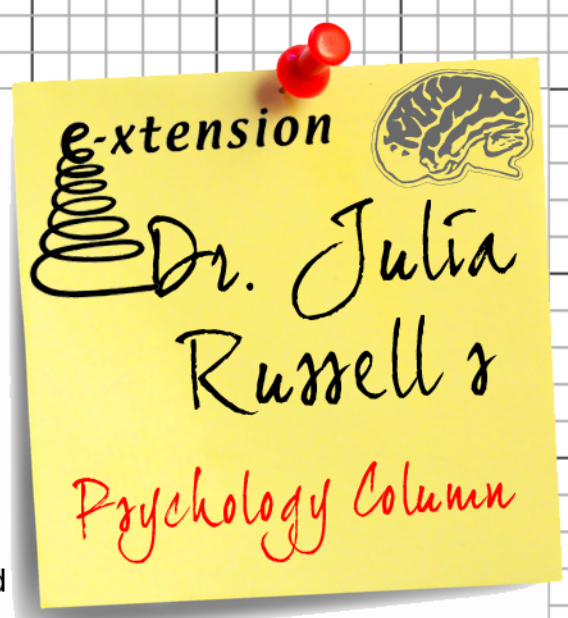
The case described was of Peter, an active, easily interested, intelligent boy (with an IQ of 102). He was 2 years 10 months when Jones began observing him and his general behaviour was typical of a child of his age.

On the first day of with peter, Jones watched him playing with toys including some beads. An experimenter (who was out-of-sight) put a white rat into Peter's cot. Peter screamed and fell over. He was moved away, leaving his beads behind. Another child, Barbara, was put in his cot. When the rat appeared she was unafraid and picked the rat up. When the rat touched Peter's beads he protested, saying 'my beads', but he didn't object when Barbara touched them.



The next day Peter's reactions to different situations and objects were observed (see Table 1).

<b>object(s)</b>	<b>Peter's reaction</b>
playroom and cot	chose toys, got into cot
white ball, rolled in	picked it up and held it
fur rug over cot	cried until it was removed
fur coat over cot	cried until it was removed
cotton	whimpered, cried, withdrew
hat with feathers	cried
blue woolly jumper	looked, turned away, no fear
white cloth rabbit	no interest, no fear
wooden doll	no interest, no fear



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Peter was also shown a live rabbit and he was more afraid of this than of the rat, so a rabbit was chosen for deconditioning.

Peter had daily play sessions with three other children and the rabbit. The other children (Laurel, Arthur and Mary) were unafraid of the rabbit. Peter was sometimes observed alone to observe his progress. New situations were used to get Peter closer to the rabbit (see Table 2).

**Table 2**

Peter's different reactions to the rabbit (the tolerance series)

- a) Rabbit in cage anywhere in room causes fear
- b) Accepts rabbit in cage 12 feet (4 metres) away
- c) Accepts rabbit in cage 4 feet (1.3 metres) away
- d) Accepts rabbit in cage 3 feet (1 metre) away
- e) Accepts rabbit in cage close by
- f) Rabbit accepted free in room
- g) Rabbit touched when experimenter holding it
- h) Rabbit touched when free in room
- i) Peter reacted badly to rabbit eg throwing things at it but also imitated it
- j) Rabbit allowed on tray of high-chair
- k) Squats beside rabbit
- l) Helps experimenter to carry rabbit to cage
- m) Holds rabbit on lap
- n) Alone in room with rabbit
- o) In playpen with rabbit
- p) Fondles rabbit
- q) Lets rabbit nibble fingers

In Figure 3 (pg 3) the scale along the x-axis is the session number. Sometimes Peter was observed frequently (eg twice a day in sessions 11 and 12), at other times less frequently (eg two months between 7 and 8). Just before this long break, Peter had touched the rabbit following positive comments from the other children such as 'Arthur saying 'Peter doesn't cry when he sees the rabbit come out'. Peter was then ill in hospital. When he came back after this long break, a big dog jumped at him and his carer, scaring both of them.

Following this event, from session 8 onwards, classical conditioning was used to help Peter. He was given food he liked at the same time as the rabbit was brought within sight in its cage. This pairing of nice food and the rabbit was repeated, moving that rabbit closer but only as close as Peter would allow and still carry on eating (see Figure 4 on page 3).

Other children also acted as role models. In session 9 the rabbit made Peter cry. Another child ran over saying 'Oh, rabbit'. Peter followed and watched, so the child acted as a role model to help Peter to move closer to the rabbit.

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## Findings

The changes in Table 2 and Figure 3 were not continuous or equally spaced in time. Sometimes Peter's behaviour improved (eg between sessions 11 and 22, from b to m) and sometimes it worsened - eg in session 33 when he was scratched by the rabbit (so it fell from n to f).

Six people (psychology students and instructors) were given the descriptions A-Q in a random order and asked to put them in order of i improvement. The resulting list is called a tolerance series.



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In session 21 an experimenter sat the rabbit in front of Peter while he was eating but he cried out 'I don't want him' and pulled away. Another child sitting nearby held the rabbit. Peter then wanted the rabbit on his lap and held it briefly.

Peter was sometimes asked about what he did at the laboratory. At the start he didn't mention the rabbit but later he would say 'I like the rabbit'. He also lost his fear of cotton, the fur coat and feathers. The reaction to rats and the fur rug with a stuffed head improved but he didn't like them as much as the rabbit. He also accepted new animals such as frogs, worms and a mouse.

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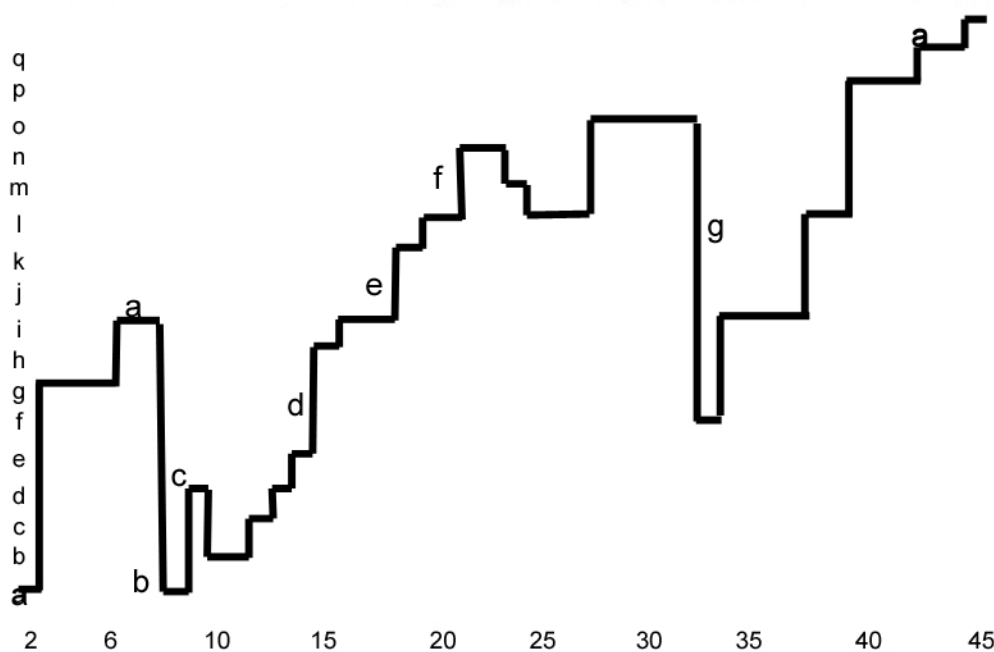


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**Figure 3**

The progression of Peter's responses in relation to the tolerance series



## Conclusion

Classical conditioning and social learning both helped to decondition Peter. This deconditioning also reduced the fear which had generalised to other objects so helped Peter to cope with new animals.

## Comments

Jones studied Peter over a long period of time so was able to track his progress showing the changes clearly. She made detailed observations so the data was very thorough. In designing the tolerance series Jones asked other people to put the items in order.

This meant that she avoided introducing bias herself.

**Figure 4**

Classical conditioning with food

*before conditioning:*

food → happy

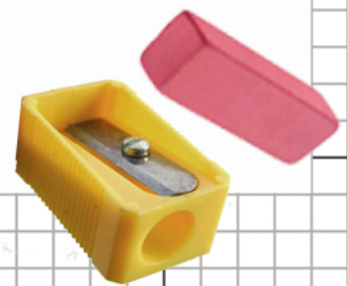
rabbit → afraid

*during conditioning:*

food+rabbit → happy

*after conditioning:*

rabbit → happy



### Hard-to-find classics 7: Jones (1924)

Jones developed two techniques to help to reduce Peter's phobia (classical conditioning by pairing the rabbit with food and social learning using the other children as models). These techniques were effective in deconditioning him and have been followed up by other researchers. Wolpe (1990, p 7), who is responsible for the development of modern systematic desensitisation, described Jones as 'a pioneer in behavior therapy'.

However, the gaps between Jones' sessions with Peter were variable, so progress could be due to changes over time rather than the deconditioning process. Also, Jones used two different techniques (classical conditioning and social learning) as well as other people who made Peter feel confident. This makes it difficult to tell which factor was most effective in his recovery.

### Questions

1. Explain why was it important that the other children were not afraid of the rabbit.
2. In general, food is only effective in reconditioning children (rather than adults). Why might this be the case?
3. Why did the response of his carer to the big dog make such a difference to Peter's fear?
4. Suggest two other objects that Peter's fear might have generalised to.

### Resources

The website below provides slides from a powerpoint presentation. Slides 33-38 give more information about Mary Cover Jones and little Peter.

<http://inside.salve.edu/~walsh/powerpointfiles/theoriesoflearning/theoriesoflearning.pdf>

### References

Watson JB & Rayner R (1920) Conditioned emotional reactions. *Journal of Experimental Psychology*, 3(1): 1-14.

Wolpe J (1990) *The Practice of Behavior Therapy*. Oxford: Pergamon Press.

