

SNIFFING TO SAFETY:

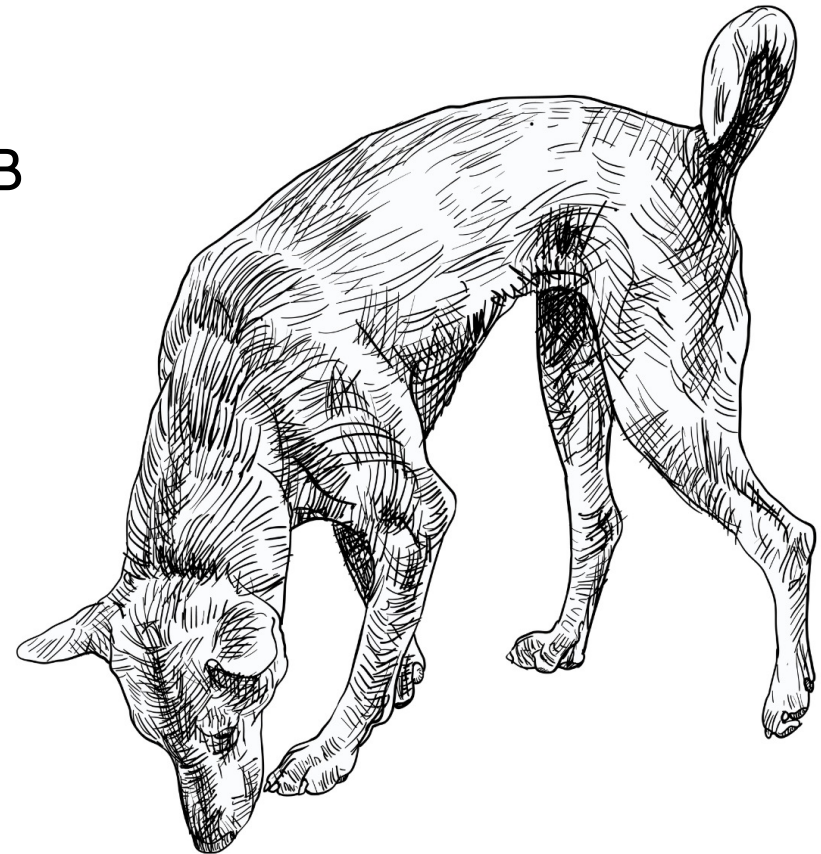
Implementing a trauma-informed approach to recovery using scentwork

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and

Natalie Light BSc, PGDip, PGCert, CCAB

Trauma in Animals Conference
30th & 31st July 2022



Aim for the talk

Text



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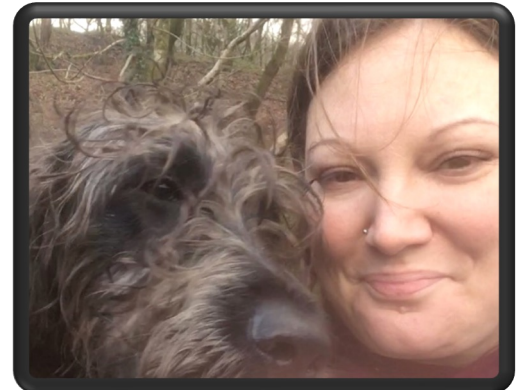
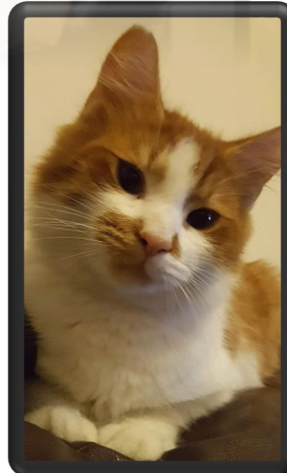
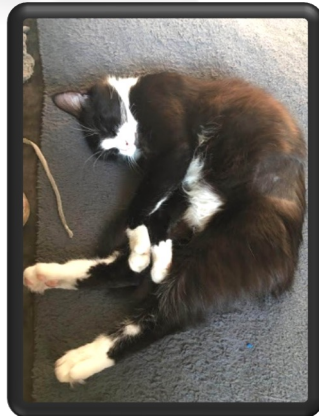
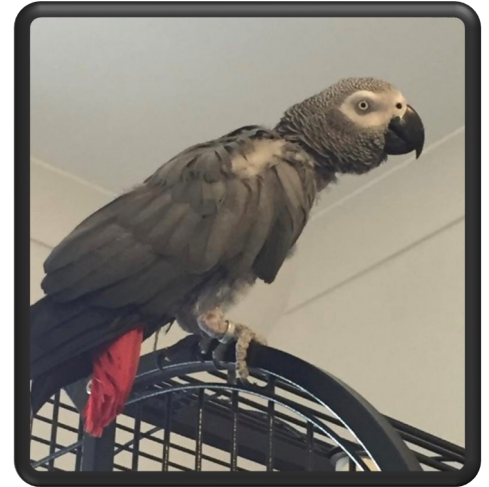
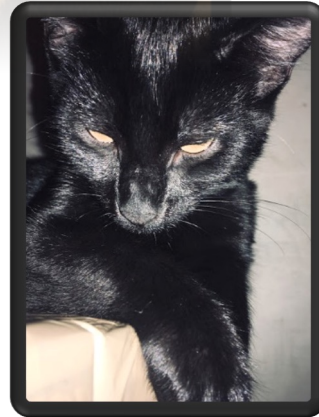
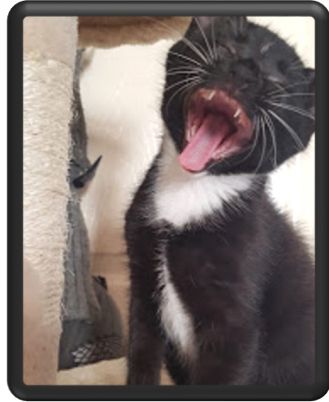
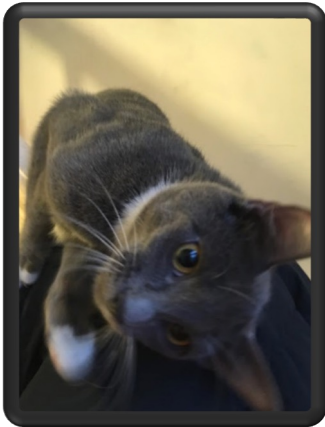
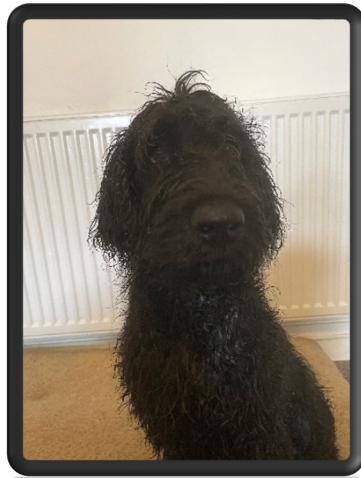
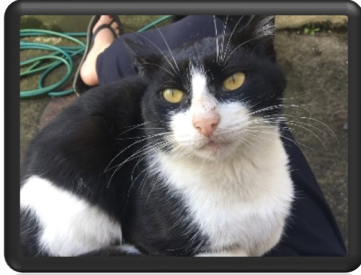


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TRAINING INSTRUCTOR



Scent production in dogs

From Nielsen

Eccrine (sweat glands) on feet

Glands in anal region

Sebaceous & apocrine glands (anal sac))

Circumanal glands

Supracaudal glands



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What can olfaction convey or provide?

- Emotion
- Pheromones
- Feeding & foraging
- Mate selection & reproductive behaviour
- Maternal care & offspring survival
- Disease detection & prevention
- Social recognition
- Stress
- Fear
- Housing & environmental enrichment

Olfaction is one of the earliest senses to become functional



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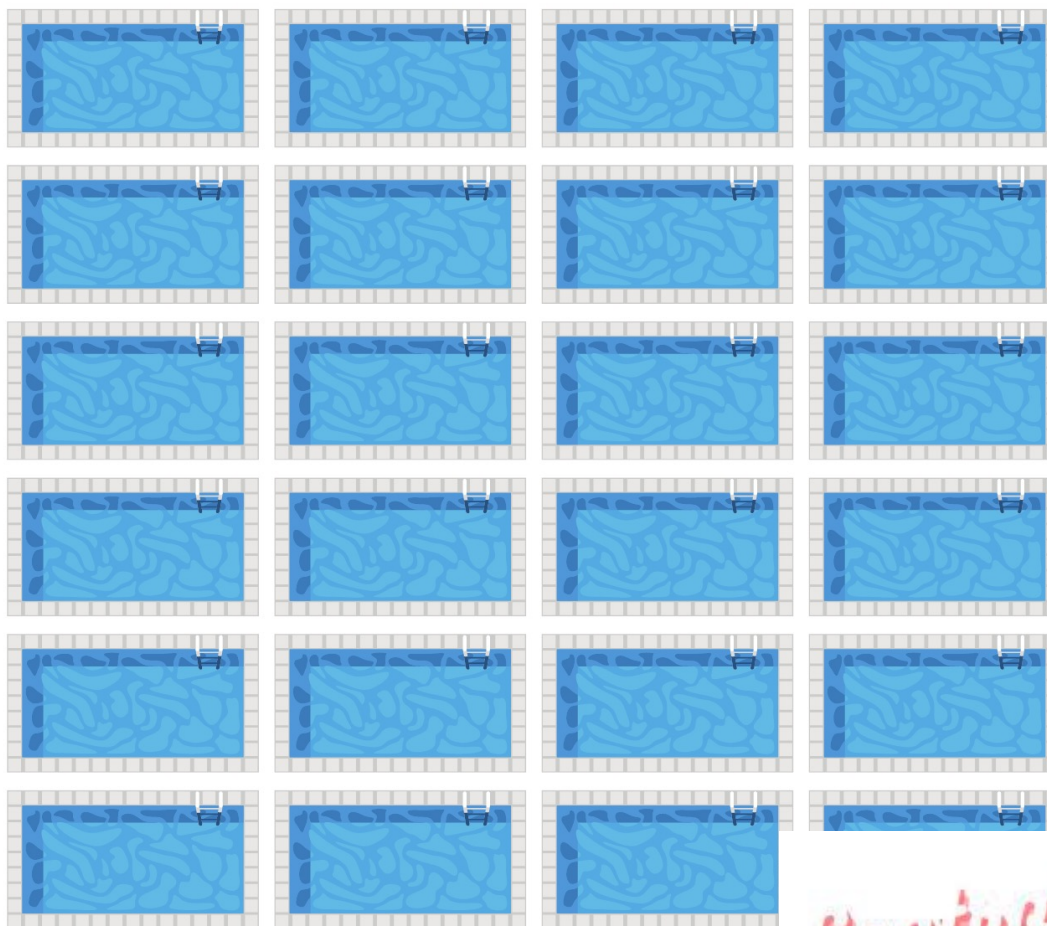
a very powerful communicator
vey emotion



What influence can scent have?

From Cat Warren
Trained dog 1 drop water in
20 Olympic pools

Nielsen
Prenatal exposure may exert
a life-long influence on
olfactory preferences



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What is 'scentwork'?

Smelling vs sniffing...



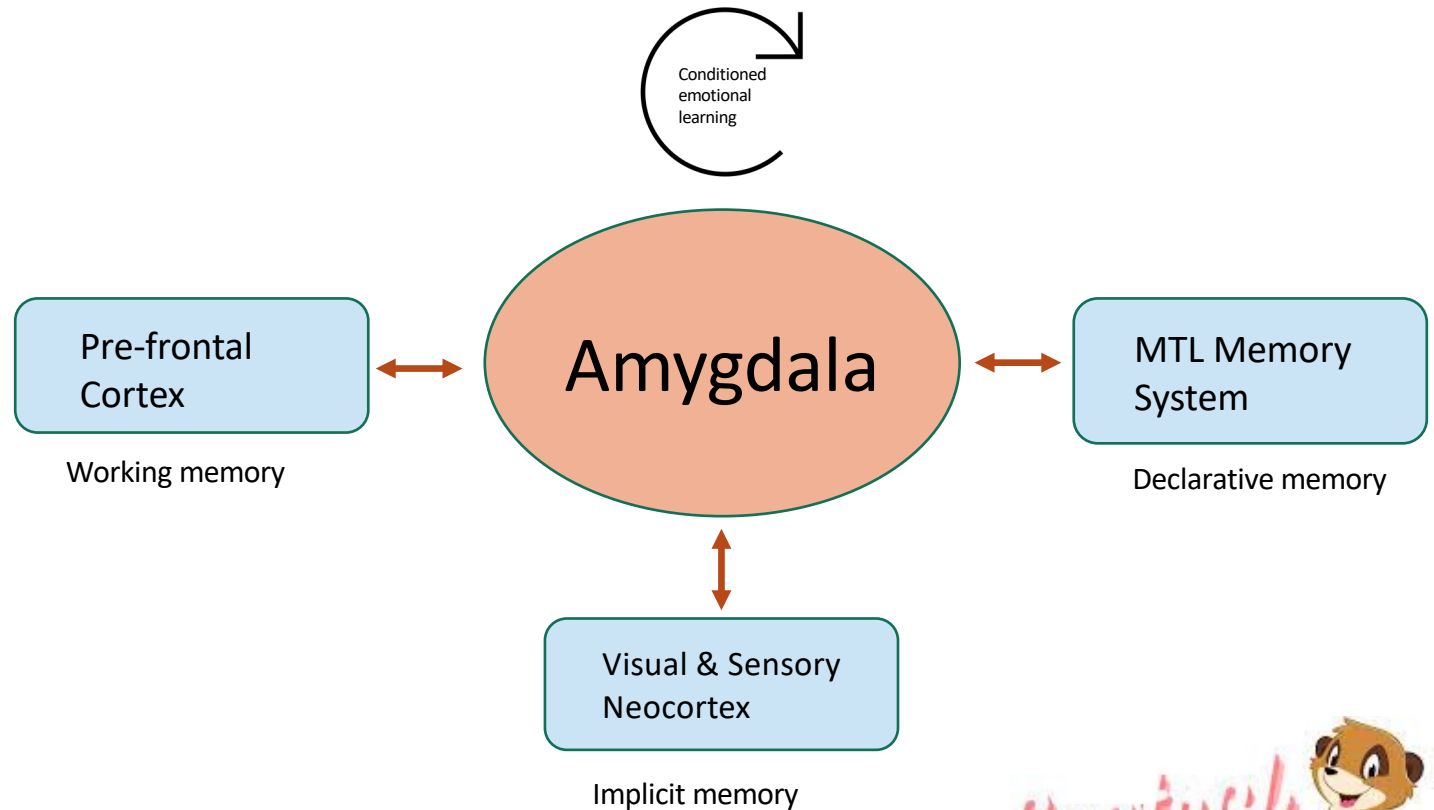
NON-CUED	CUED
Enrichment	Scent games
Free-work	Formal searches
Scent games	Ad-hoc
Searches	Behaviour modification



Why is scentwork important?

Trauma and olfaction

- Emotions
- Cognition
- Memory



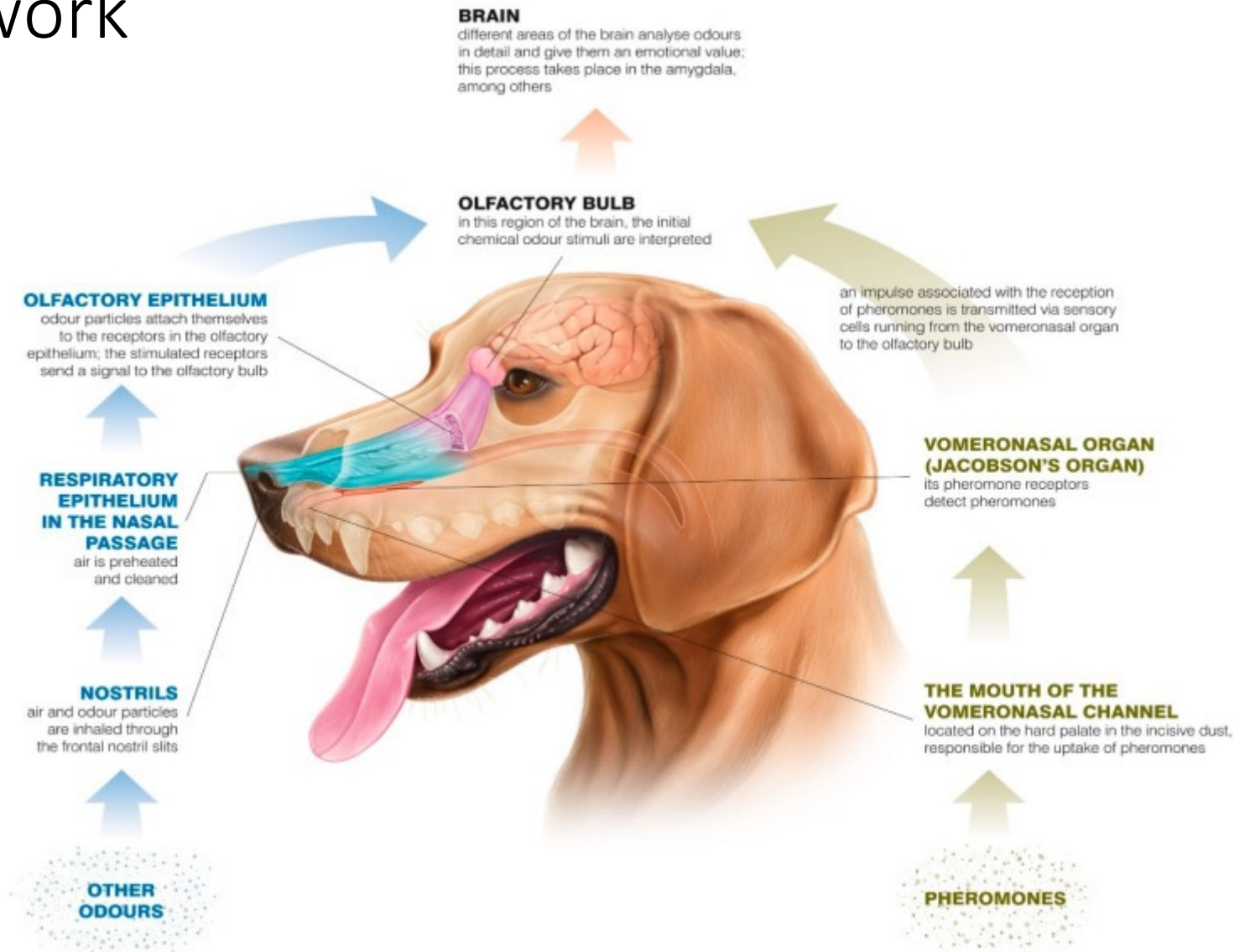
Adapted from: Klein-Koerkamp, Y., Baciú, M. & Hot, P. (2012) Preserved and impaired emotional memory in Alzheimer's Disease. *Frontiers in Psychology: Emotion Science*, Vol. 3 (Article 331).



Why is scentwork important?

The 'most important' sense for dogs?

- AOS: Accessory Olfactory System
- Adult neurogenesis
- Relative size of olfactory bulbs
- Olfactory neurons



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Substantive supervision: PhD Agata Kokocińska-Kusiak, veterinarian Martyna Woszczyło.

General principles of trauma informed therapy. . .

- Have knowledge, understanding & empathy for the traumatic experience
"Fear & trauma have to be transformed or they will stay in the mind like an unsheathed knife"
- Have low expectations & be prepared to lower them
"Be intentional but not intense"
- Have patience & focus on feelings, not doings
"Trauma treatment isn't training"
- Create a consistent, predictable environment
"Be a companion not a captor"
- Prevent re-traumatisation
"Build trust & resilience by providing choice & control"



Trauma recovery & choice

Treatment can be as complex and long-lasting as the trauma itself.

“Clinicians have learned to focus on issues of safety, affect regulation, coping and self-management skills as well as on the therapeutic relationship itself⁸”

Key elements:

- Control
- Predictability
- Ability to moderate timing, duration & intensity of experiences⁸

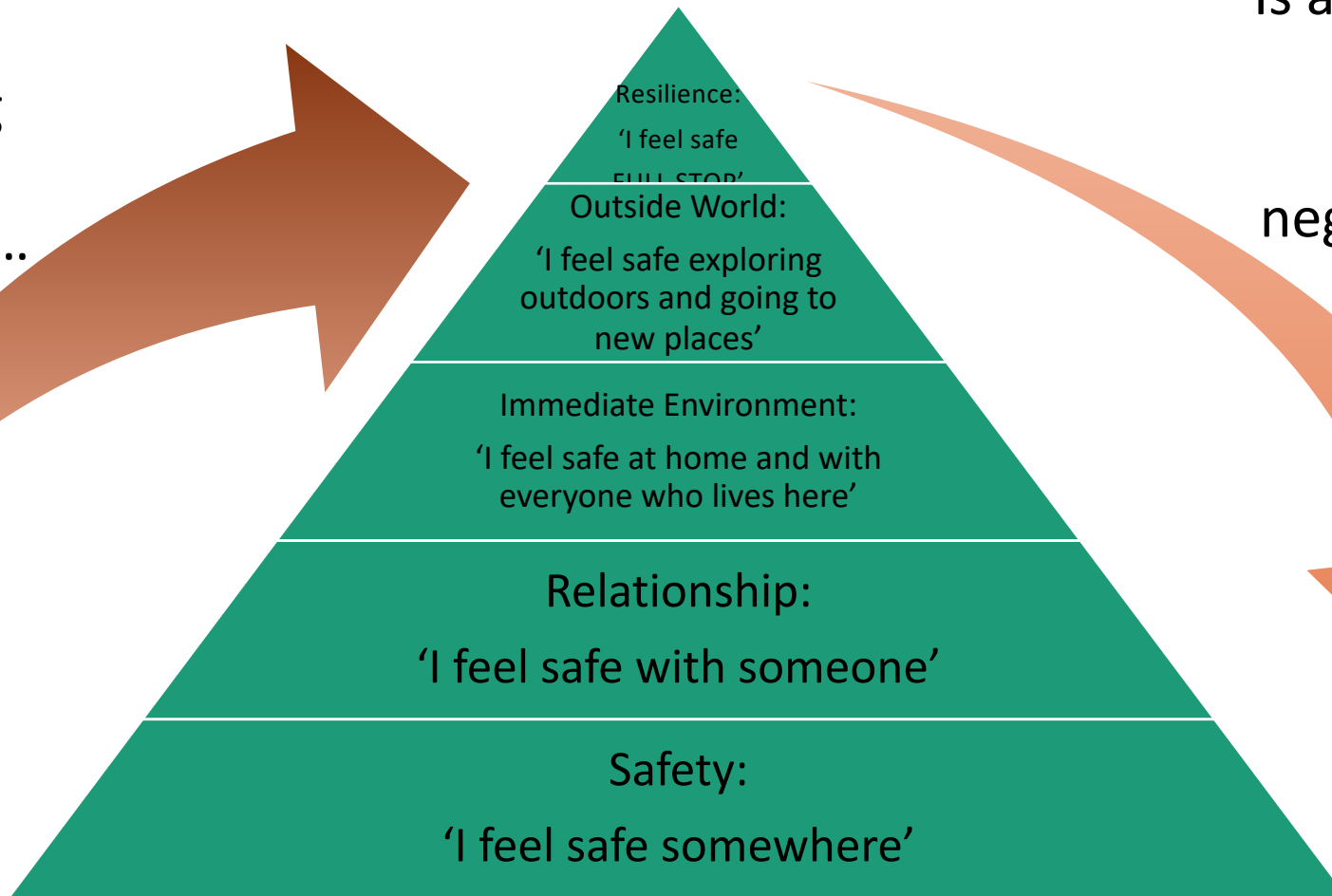
Scentwork
is perfect
for this!



How scentwork may facilitate trauma recovery

Up-
regulating
positive
emotions...

Is as important
as down-
regulating
negative ones!



How scentwork may facilitate trauma recovery

Relaxation:

If we want to encourage relaxation we have to do relaxing things!

[The Dog Field Study:](#)

Pulse rate is inversely correlated to intensity of sniffing

Olfactory enrichment may improve welfare:

- Lavender & chamomile increased resting behaviours and decreased movement and vocalisation (Graham *et al.*, 2005).
- Lavender & rabbit scent decreased stress behaviours and increased exploration (Murtagh *et al.*, 2020).



Graham, L., Wells, D. L. & Hepper, P. G. (2005) The influence of olfactory stimulation on the behaviour of dogs housed in rescue shelter. *Applied Animal Behaviour Science* **91** (1-2) pp 143-153.
Murtagh, K., Farnworth, M. J. & Brilot, B. O. (2020) The scent of enrichment: Exploring the effect of odour and biological salience on behaviour during enrichment of kennelled dogs. *Applied Animal Behaviour Science* **223**

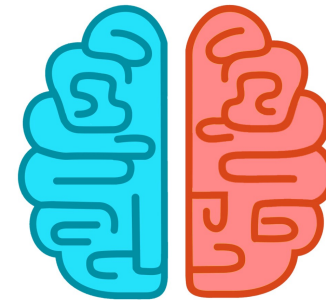


How scentwork may facilitate trauma recovery

Sensory Integration

Vertical Integration:

Horizontal Integration:



How scentwork may facilitate trauma recovery

Optimism



VS

Pessimism



- Scentwork induced a more positive emotional state and optimistic reaction to ambiguous novel stimulus (Duranton & Horowitz, 2019)
- Essential oils led to improved affective state and more optimistic bias (Uccheddu *et al.*, 2018)

Ellis



Ellis



Ellis



Ellis



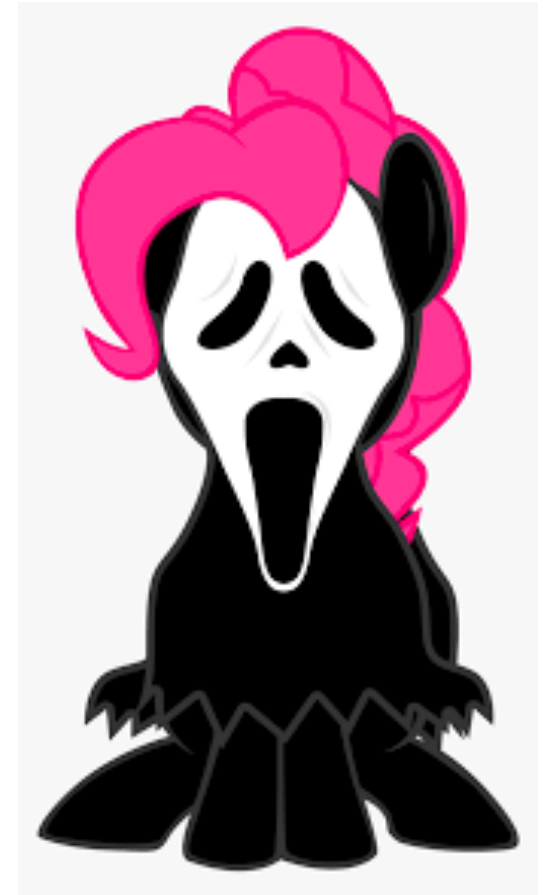
Ellis



Ellis



Potential barriers to scentwork



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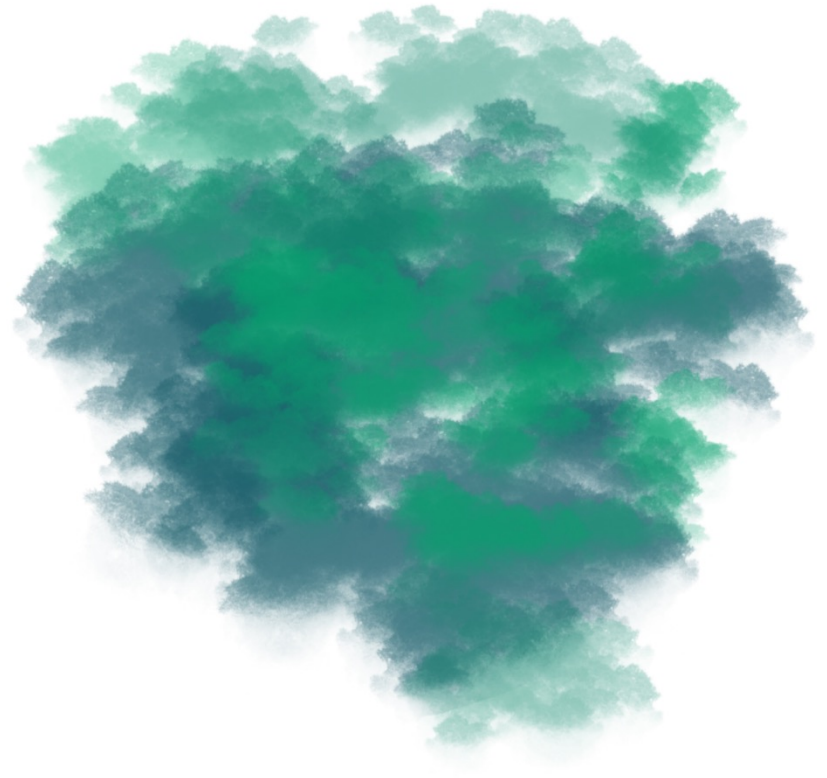
Scent as a “ghost” stimulus

Marc Bekoff

Nielsen

Prenatal exposure may exert a life-long influence on olfactory preferences

Olfaction is one of the earliest senses to become functional



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Welfare assessment tools

'Five Freedoms'⁴

- need for a suitable environment
- need for a suitable diet
- need to be able to exhibit normal behaviour patterns
- need to be housed with, or apart, from other animals
- need to be protected from pain, suffering, injury and disease

Maslow's hierarchy of needs⁵



4. Animal Welfare Act. (2006).

5. A. H. Maslow (1943). Psychological F

Sniffing as a welfare indicator

Marc Bekoff

“scent can be a very powerful communicator
Scent can convey emotion Sensory blocking, disassoci

From Nielsen

Pheromones

Feeding & foraging

Mate selection & reproductive behaviour

Maternal care & offspring survival

Disease detection & prevention

Social recognition

Stress

Fear

Housing & environmental enrichment

ie of the earliest senses to become functional



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What to observe . . .



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Sniffing as a welfare indicator

SAFETY



Body & head remain still, nostrils move
Body & head remain still, mouth open
Body remains still, head moves upwards and nostrils/mouth move
Body lean towards but weight remains backwards, nostrils/mouth move
Body lean towards with equal stance, nostrils/mouth move
Step towards but weight remains backwards, nostrils/mouth move
Step towards with equal stance, nostrils/mouth move
Several slow steps towards, nostrils/mouth move
Trot towards, nostrils/mouth move



How can we implement scentwork to safety with traumatised dogs in a pet home setting?



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Therapeutic uses for scentwork

General considerations:

Every dog is different!

The importance of titration at each stage

Trauma-related cues (TRCs) – observation and recording



Severely traumatised dogs may panic if our chosen scent masks scents that are important to them...
proceed with caution.



Therapeutic uses for scentwork

Provision of positive emotional experiences (Stage 1)

Initial interest
Nose twitch



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Therapeutic uses for scentwork

Provision of positive emotional experiences (Stage 2)

Movement towards



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Therapeutic uses for scentwork

Provision of positive emotional experiences (Stage 3)



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Therapeutic uses for scentwork

Relationship Building:

- Trust
- Cooperation
- Secure attachment
- Case Study: Benji



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Therapeutic uses for scentwork

Self-Soothe Box

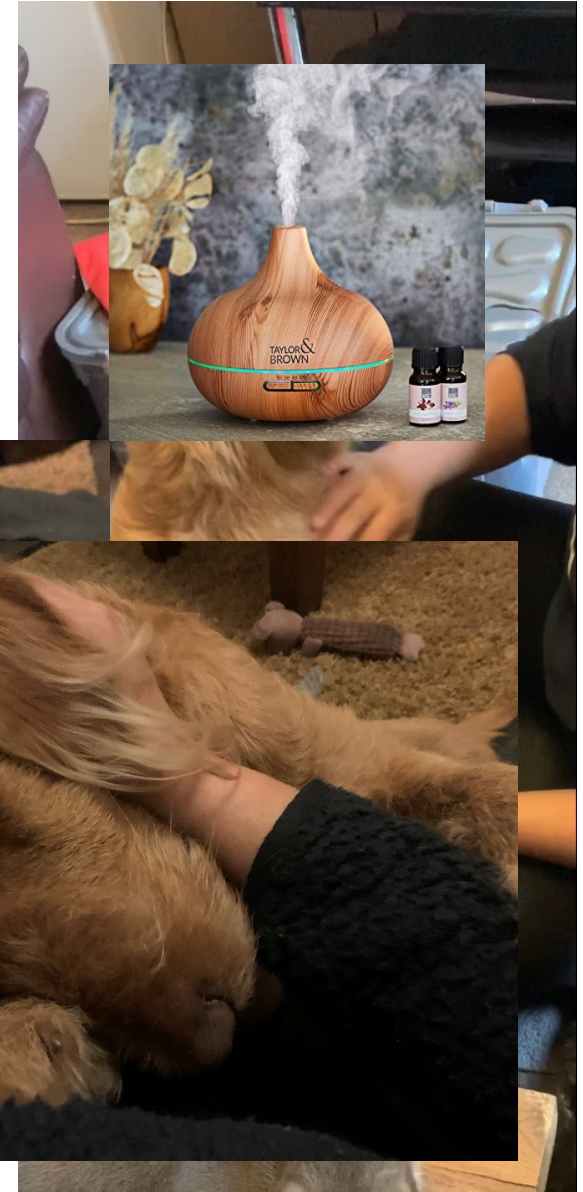
- Control
- Choice
- Self-soothing



Therapeutic uses for scentwork

Conditioned Emotional Response

- Olfaction is a powerful way of inducing positive emotional states
- By repeatedly pairing a specific scent with a relaxing activity we can use that scent therapeutically
- Predictability
- Case study: Finn



Therapeutic uses for scentwork

Free-Work

- Control
- Choice
- Increased window of tolerance (focus)
- Planned, titrated exposure (SD/CC)
- Introduce gentle challenge (physical & psychological)



With thanks to Sarah Fisher, ACE Connections

Therapeutic uses for scentwork

Behaviour Modification

- Gateway to counter-conditioning (lower arousal = takes food)
- 'Ad-hoc' distraction (safety) & CC using a conditioned emotional experience
- Planned, titrated exposures with a specific goal in mind
- Case study: Rocky



Summary



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Thank you

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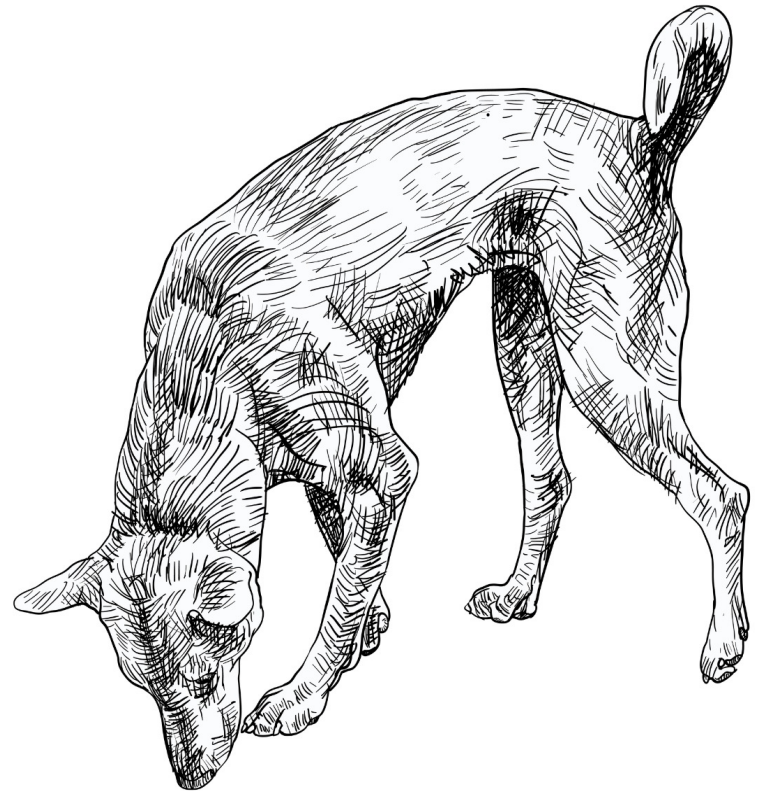
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