(In)tangible Teamwork

Human Perceptions of Nonhuman Sensing in the Case of Sniffer Dogs

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Abstract: Sniffer dog teams are a vital, and at the same time highly contested, part of airport security practices. While human dog handlers are confronted with scepticism concerning the teams' reliability and capacity in detection work, they also have to cope with their nonknowledge when considering what their canine partners smell when searching for explosives. Based on the insights from field observations, as well as interviews on more-than-human sensing practices in predominantly German security contexts, this essay explores the way sniffer dog teams work and asks how they deal with the nonknowledge issue. In conceptualizing their human–animal interaction as a performative dance of agency, nonknowledge can be characterized as the enactment of a productive force through reciprocal responsiveness and sensual knowledge. In exploring the nexus of human perception and animal sensitivity, this essay engages with the question of how the epistemology of knowing shapes interspecies communication in security-related contexts.

Keywords: *sniffer dog teams; nonhuman sensing; nonknowledge; animal agency; animal labour; human–animal relationality; interspecies communication*

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> *Resulting from a combination of specific ideas about the world and an interaction with that very world, the outcome of "thinking with animals" is a knowledge object that contains elements of both the world and of a particular way of knowing it. Ideally, then, studying these products may shed a light both on the world and on the perception of it.*
>
> —Andreas Roepstorff, "Thinking with Animals"

"*What does the dog smell?*" is a rhetorical, self-directed question that I encountered repeatedly in different forms when talking to sniffer dog handlers in their work environment.[1] These conversations were conducted as part of a study that considered the area of explosives detection and how humans conceptualize their nonhuman partners' senses. Even though the question of what is on the mind of an animal relates to various species with which humans interact, in the case of the sniffer dog it seems to be both a highly consequential and closely scrutinized one.

The question is raised within the context of a larger critique of sniffer dogs, especially when they are working in the service of the state. As such, they are characterized as an extension of sovereign power and criticized for their "ability to enact a politics of smell".[2] This critical discourse of instrumentalizing sniffer dogs as a tool for state power comes from outside the security field, however. For the actual working reality of sniffer dogs within state services, other lines of critique are more dominant. In the case of Germany, explosives detection dog teams are employed by the military, the police, and by private security firms.[3] Within the field of airport security, in the focus of my fieldwork, explosives detection dogs are often compared

1 I agree with Donna Haraway that "handler" is a terrible term for one entity in a partnership. But since it is an established term within the field, I will use it to stay true to the field's terminology. See Haraway, *When Species Meet*, 225.

2 Neocleous, "Smell of Power," 200.

3 Sniffer dog teams also exist in other services and detection fields, e.g., search and rescue, drugs or conservation.

with technological devices.[4] Yet none of the currently available technologies are seen as a match for sniffer dog teams when engaging in relevant tasks. Sniffer dogs can cover a wide area at high speed, are physically flexible in reaching all parts of cargo, and can differentiate between odours,[5] which is something that cannot currently be achieved by an electronic device.[6] Nevertheless, these abilities are all still challenged on the grounds that they only come in pairs with their handlers, or that they lack objective standards owing to the difficulty of establishing with any certainty precisely what it is that the dog smells.[7]

"*What does the dog smell?"* is also a question in everyday scent work. Here, however, it is generally perceived as an unsolvable mystery that must be accepted. It is indeed a difficult question to answer with definitive certainty, but one that deserves more attention from scholarship, particularly within the domain of everyday animal labour. There is, to be sure, a growing body of work within animal studies that engages with this issue, focusing not only on the negative working conditions of animals, but also on the positive value that work might have for animals.[8] Kendra Coulter, for example, approaches this question from an interspecies solidarity standpoint.[9] She elucidates the idea of providing humane jobs for animals, meaning that the animals are "*suitable for and interested in* the job", and have the "right to choose whether to work or not".[10] On a similar note, Charlotte Blattner argues

4 In Germany, with regard to aviation security, explosives detection dogs are deployed only by security companies that are accredited to control air freight. In the case of more general airport security they are also employed by the police.

5 The term odour is the appropriate terminology since the often used equivalent "scent" refers only to the smell of living beings (human or animal). Odour is a broader term encompassing the vapour of explosives, drugs, and other substances. See Furton and Winialski, "Olfactory Capabilities", 23, 24. For the purposes of this paper I will also frequently use the term "scent work".

6 See Furton and Winialski, "Olfactory Capabilities", 22 for this evaluation.

7 These arguments have been raised in various informal discussions in the airport security field. As the field is very security-sensitive, there is no formal criticism from within.

8 See Porcher and Estebanez, "Animal Labor", 17.

9 Coulter, *Animals, Work*; "Humane Jobs and Work-Lives"; but see also Blattner, "Animals Have a Right" For an overview of the current scholarship, see Blattner, Coulter, and Kymlicka, "Introduction: Animal Labour", 2.

10 Coulter, "Humane Jobs and Work-Lives", 36; emphasis in original.

from an interspecies justice position that animals should not only be protected from exploitative work conditions, but should also have the right to work, pointing to the idea of self-determination for non-human species, and conceptualizing different ways to recognize and ensure their free will.[11] Maintaining humane jobs for animals, then, means at a minimum, entitling them "to retirement, dignity, and a great deal of autonomy", as Coulter emphasizes.[12] Of course, the degree of autonomy available to animals depends greatly on the specific kind of work. Unlike animals working in the livestock industry, for instance, the labour performed by sniffer dogs has the potential to be "good work", as it is based on reciprocity.[13] "Good work" in this context should have an emancipating impact on the animal. As well as the opportunity to exercise agency and experience interspecies sociability,[14] one should also ensure that animals can be "esteemed as valuable workers" as Alasdair Cochrane writes, and allow for pleasure, which, in Cochrane's definition, includes the use and development of skills.[15] One important skill within scent work is that of "emotional labour", a concept developed by Tiamat Warda, which encompasses emotional displays in the course of a formal job to "align with social and organisational guidelines".[16] Emotional labour is steered by so-called "feeling rules", which are taught in the training. Warda differentiates these emotional displays from those in emotion work, which are not formally required, but rather entail a social use, for instance, to keep interspecies communication going.[17]

The special human–animal encounter that lies at the heart of scent work might be described as a form of dance: a "dance of agency" as Andrew Pickering phrases it. A characteristic of this notion is the shifting agency between humans and animals in an "extended back-and-forth dance of *human and non-human agency* in which activity

11 Blattner, "Animal Labour", 95, 96, 99.
12 Coulter, "Humane Jobs and Work-Lives", 35.
13 Cochrane, "Good Work for Animals"; cf. Porcher and Estebanez, "Animal Labor", 11.
14 Blattner, "Animals Have a Right", 34.
15 Cochrane, "Good Work for Animals", 49.
16 Warda, "Interspecies Emotion Management", 86.
17 Warda, "Interspecies Emotion Management", 87, 89, 90.

and passivity on both sides are reciprocally intertwined".[18] This means that both entities are relevant in their recursive effects. Nevertheless, agency seems to be a challenging concept within the human–animal ensemble: not because of the question of whether the dog has any, but rather concerning how agency is distributed within the ensemble and who is leading in the interaction. Even within the seemingly homogeneous field of sniffer dog handlers, there are radically different conceptions, or even "cosmologies", when it comes to thinking about the dogs' agency.[19]

The classic anthropological term "cosmology", as defined by Nils Bubandt and Andreas Roepstorff, means an "encompassing conception of the world". This proves to be a fruitful framework with which to explore the differences I encountered in the field in how handlers made sense of their communication with their canine partner.[20] Based on his ethnography of fishery in Greenland, Roepstorff speaks of the different cosmologies of fishers and biologists, with a particular focus on where they clash in their perspectives and understanding of fish. He refers to these different cosmologies as "thinking about" versus "thinking with" animals. "Thinking about" is framed by a Cartesian dualism, where the difference between human and animals is crucial and taken as self-evident. The contrast in cosmology is shown in Roepstorff's example of the way the Inuit fishers ascribe personhood to animals.[21] "Thinking with", in the way Roepstorff describes it, entails an "*a priori* ascription of semiotic competence".[22] Animals from this perspective are seen as being capable of interpreting their environment and actively engaging in communication with other species, including humans. As I will show, both cosmologies are at work in how human handlers approach the agency of their canine partners, and they also affect the communication and sociality of the teamwork as it unfolds in the encounter.

18 Pickering, "Material Culture", 195; emphasis in original.

19 Koski and Bäcklund, for instance, observe that the way canines are humanized, animalized or instrumentalized in training depends on humans' "modes of thought connected to dogs" ("Position of Dogs," 27).

20 Roepstorff and Bubandt, "Introduction", 21; see also Roepstorff, "Thinking with Animals."

21 Roepstorff, "Thinking with Animals", 213.

22 Roepstorff, "Thinking with Animals", 203; emphasis in original.

Both versions of the question of "what a dog smells", be it the sceptical position of comparison with technologies or the everyday mystery from inside the field, entails a scrutiny of knowledge claims about the human–animal communication. What we do and do not (or cannot) know about animal sensing seems to be of crucial concern to everyone who is confronted with or engages in this practice. I use the term nonknowledge to characterize the human perception of this mystery. Nonknowledge is often perceived as a lack of knowledge or as the opposite of knowledge. However, to analyse human–animal work interaction it would be useful to understand nonknowledge as performative, as something that emerges in action and is always intertwined with other forms of certainty. Donna Haraway's notion of knowledge in the encounter is helpful to grasp nonknowledge in sniffer dog teamwork. She distinguishes between positive and negative ways of knowing between the partners. The possibility of a positive way of knowing derives from mutuality in the encounter and curiosity as to what the partner is thinking about.[23] In describing negative ways of knowing, by contrast, Haraway draws on negative theology. Generally speaking, there is no way to know for certain who or what god — or, in this case, the nonhuman other — *is*, and yet at the same time there exists a certainty about the other, a certainty that Haraway compares to love.[24] Haraway's differentiation thus points to an affirmative notion of nonknowledge, conceived not as a *lack* of knowledge, but rather as a different way of knowing, one that is not based on certainty. Nonknowledge in the human–animal encounter then must be seen as being productive. It is socially situated and enacted in its mutuality in light of the tacit, intangible knowledge at play.

This handling of nonknowledge within human–animal interaction will be explored further, focusing on the ways humans conceptualize their access to their canine partners' modes of sensing. These explorations are based on insights from a research project exploring the work of sniffer dogs as an example of lively resistance within a field where security is increasingly automated. The material for the case study is based on thirteen field visits with a mix of non-participant

23 As Haraway argues throughout *When Species Meet*, especially 95–132.

24 Haraway, *Companion Species Manifesto*, 50.

and participant observations, as well as twenty qualitative interviews with a total of thirty-five dog handlers, trainers, and authorities within the police, private security, and customs.[25] These were conducted primarily in Germany, but also in the Netherlands and Switzerland, between August 2021 and March 2024. The time spent in each field ranged from a few hours up to a day, and the interviews were mainly conducted during these visits. The field visits included direct observations of daily practices, predominantly airport security, as well as visits to sniffer dog training facilities also for general explosives detection dogs. Visits to the customs sniffer dogs teams complemented the observations, even though they focused on other topics rather than explosives. All participants (humans and animals) mentioned have been anonymized. The analysis of the interviews and fieldnotes was based on the principles of abductive analysis.[26] This means that the successive coding process filtered out key analytical themes of different forms of sensing, knowing and not knowing as it was voiced by the dog handlers or shown in their interactions.

In what follows, I will address the modes of knowledge and nonknowledge that can be differentiated in this field and sketch out how they prove to be important for the real-world performance of sniffer dog teams. I begin by outlining knowledge claims from the field, and then proceed with an account of knowledge that is produced within the actual intra-action of the ensemble. Considering the teamwork as a "dance of agency", I will demonstrate the role of sensation in the oscillation of agency within the team. Highlighting the quality of mutual encounters in the dance, the focus will be on the sensual tacit dimension that can be conceptualized as nonknowledge. The concluding thoughts will explore how human cosmology, and perceptions of their partner's agency, relate to the negative way of knowing, thereby emphasizing how humans evaluate the nonhumans' olfactory capacity and performance, despite their sensory inability to perceive the odours themselves.

25 Even though the customs sniffer dogs were employed to detect an odour (wildlife) distinct from the explosives detection dogs in the police and private security field, the conversations and observations yielded insights in their comparisons.

26 See Tavory and Timmermans, *Abductive Analysis*.

Entering the Ontology of Dog Handlers: From the Genetic Fit to "They Are All Individuals".[27]

When talking to dog handlers, whether within the police, customs or in the private security sector, one quickly discovers that they share a common knowledge concerning the nature of dogs, both as a species and with regard to specific breeds. Opinions about which breeds inherit which character traits were consistent throughout the field: German and Belgian shepherds were seen as best fitted to become detection dogs.[28] Reportedly, they inherit the necessary traits for the work: playfulness and a "tenacious desire to track" [*belastbaren Finderwillen*], "which goes beyond the play instinct" (Security, interview 32). Furthermore, they have to be steady, meaning they are not afraid of loud noises, traffic, or a specific terrain. They have to be able to focus and not be easily distracted, show a "willingness to work", even when it means going beyond their limits. All of these traits are seen as something that cannot be trained but has to be innate. Within the recruitment phase, the handlers look for pre-existing qualities in the dog that match their own framework, such as genetic predisposition (Security, interview 32).[29] There are differences insofar as some adhere to a fantasy of "purity",[30] while others merely associate the negative outcome of an overemphasis in breeding.

Since the state services have no breeding programs on their own, they rely on trusted sellers. The dogs are taken in on trial for about six months, during which they are thoroughly checked for health and character traits to see if they fit the job description, and to evaluate the development of the human–animal bond during this time. The sniffer dog teams rely on a special bond with one specific human handler, so that they can depend on each other and develop

27 Police, interview 3. All translations of German quotations into English, both from the interviews and fieldnotes and from published sources are by the author.

28 This is identical to the insights of Ahto-Hakonen and Hakonen from the Finnish police dog field, see Ahto-Hakonen and Hakonen. "All Fun and Games", 730, 731.

29 See also D'Souza, Hovorka, and Niel, "Conservation Canines", 67, regarding the "play drive" requirement for canine scent work. Interestingly, their study shows that detection dogs can be chosen from shelters, and do not have to be purebred dogs where everything is supposedly known about the dog.

30 See Guest et al., "Roundtable", 13.

a unique responsiveness. It is this uniqueness that is criticized by those in the security field for the lack of interchangeable partners in the work schedule, but also for the monopoly of interpretation that one person carries. In the field, this feeds scepticism about the accuracy of interpretation in detection. In the literature, the embodied consent in the interpretation is criticized for being one person's responsibility.[31] It is difficult to know how to ensure consent within the recruitment process and to find out if the canine is interested in the job. While Blattner considers whether consent is in fact "made" by the human handler, the common perception in my field was that sniffer dogs have to want to work and cannot be forced into it.[32]

All dog handlers within the airport security field are obliged to undertake (recurrent) training, which entails basic theory on canine behaviour, obedience, odour characteristics and behavioural conditioning. Another key influence on the handler's style of thinking is the training instructor, whom many think of as a mentor. Dog handlers also seek out factual knowledge on their own (e.g. from other trainers or specialist literature). But above all, their practical knowledge is acquired collaboratively through living and working with their canine partner in a daily basis.

One issue in which distinct cosmologies in the field come into view is the working assignment of the dog. So-called "single purpose dogs", as in the case of aviation security certified explosives sniffer dogs, are trained solely for these specific tasks. So-called "dual purpose dogs", assigned for protection and detection for example, are expected to switch between aggressive and playful modes, depending on the job. However, one handler from a private security company commented that "the dual-use dog is a myth" (Security, interview 32). His perception was an example of a "new perspective" in the field, one that contradicts and challenges a great deal of conventional training and perceptions, by focusing on positive reward-oriented methods.[33] The parallel training styles in the

31 Blattner, "Animal Labour", 108.

32 Blattner, "Animal Labour", 107.

33 For the sniffer dog training example, see Fjellanger, "Learning Principles", 11–15.

field epitomized a paradoxical co-existence of paradigms.[34] The paradigm shift "from strict to soft methods" that Jenni Ahto-Hakonen and Aki Hakonen describe in the context of Finnish police dogs was also evident in my field participants.[35] This varied, however, according to the types of tasks the dogs were required to perform. In the case of a dog who was supposed to protect and detect, classic training methods were still present. In contrast, "single purpose" explosives sniffer dog teams were increasingly using positive reinforcement methods. This shift in the "dog training culture" [36] marks a radical renunciation of earlier practices. Justyna Włodarczyk identifies a shift that goes even further beyond positive reinforcement, and which can be seen especially clearly in the culture of agility training.[37] She describes it as "becoming more dog". Approaches such as this make it clear that human agents within sniffer dog work are not just subject to influences from within their disciplinary bubble, but that the general human–animal relationship is influenced by other cultural changes.

This new way of thinking is also connected to more general changes, specifically in the domestic living conditions of handlers and their canine partners. Whereas in the past, handlers mostly lived in houses and kept their dogs in cages in the backyard, today, new handlers tend to live in apartments and share their living space with their canine partner. This shift in living conditions has fundamentally changed the way humans and dogs relate to each other. Keeping dogs outside the household served to emphasize an emotionally distanced and hierarchical power-relation, whereas once they moved into the same living space, animal partners became an integral part of the family. Even though, formally, the employer has ownership of the canine worker, the interspecies partnership extends into their private lives and even into the one or the other's retirement,

34 This is similar to how Włodarczyk describes it ("Be More Dog", 40).

35 Ahto-Hakonen and Hakonen, "All Fun and Games", 735. More generally, see also Koski and Bäcklund, "Position of Dogs" and Włodarczyk "Be More Dog".

36 Charles et al., "Fulfilling Your Dog's Potential".

37 Włodarczyk "Be More Dog". Coulter also talks about a departure from "antiquated training practices", in her case with the example of horse training. Coulter, "Humane Jobs and Work-Lives", 37, 41.

a phenomenon that Kendra Coulter refers to as "work-life".[38] Animal labour within state service corresponds to this notion of "work-life", since the sniffer dogs are cared for by their handlers after work and are entitled to a pension. One dog handler from customs explained that her canine partners are allowed to come to work even after retirement, but that they are off duty. This is so they can keep their familiar daily environment and companionship (Custom, interview 20). Furthermore, the handlers try to distinguish between the work and private sphere since both parts of their lives are deeply influential to the other. Some help their canine partner by putting on a different collar for work than the one for at home, for example, so that the distinction is symbolically marked.

While on the job, the search task requires the emotional labour of both entities — the human handler must withhold their emotions so as not to interfere in the sniffing process, and direct appropriate emotions towards their canine partner at the end of the search. The sniffer dog in turn must engage in appropriate emotional displays, as these are a crucial feature of how to indicate a search result. What is seen as appropriate is something that both the handler and canine partner learn in the training, and is guided by "feeling rules" regarding the exact exercise (such as the gesture to indicate a scent or the duration of this gesture).[39]

In another police dog training setting, an instructor described the changes in the field as a result of the increasing open-mindedness of trainers. Instructors are developing new methods with as little negative reinforcement as possible. While training through positive reinforcement turns out to be quite time-consuming, handlers and instructors observe and reflect on the way the animal teammate now conducts their work in a joyful manner. The classic methods, in which pressure is put on the dog, are now perceived as harming

38 Coulter, "Humane Jobs and Work-Lives". As the comparative study on the work of conservation canines by D'Souza, Hovorka and Niel shows, humans who control the work-lives must meet the demands of humane jobs so that canines can fully embrace them ("Conservation Canine").

39 Warda, "Interspecies Emotion Management", 83, 87.

them, which leads to avoidance behaviour (Police, interview 1).[40]

Different thinking styles also reveal themselves in the way that human handlers perceive the dog ontologically as an animal. Here, common knowledge suggests that the dog, in general, is a pack animal. Even though many handlers agree on this, it has different consequences when it comes to the distinct ways of thinking. One senior police dog handler, whom I accompanied throughout a day in the field, characterized dogs as "stupid". Since they are pack animals, he said, they just follow others, looking for an alpha. To him it was clear that this had to do with the fact that dogs are still predators. He would always ask himself: "How would nature react? What would the wolf do?" (Police, interview 3). When "thinking about" dogs, the handler talks about the way the specific configuration of dogs' brains is responsible for their talent, which makes their sniffing capabilities unique (Police, interview 3). For this handler, a dog's personality is genetically determined. This emphasis on biological features extends into seeing the dog as a latent predator constantly observing the human handler to find his or her weak spot. With this view the handler emphasizes the species-separating characteristics in an extreme form. In a different case, a dog handler from a security company connects the idea that dogs are pack animals to their longing for affection and need for the social company of others (Security, interview 32). This handler argues strongly against the "old school" practice of "breaking" the dog, which for him meant achieving absolute obedience and instilling fear. For the handler, this is an outdated attitude, but one which is still prevalent in the field. Disputing the old view that a dog will always challenge the next one above them in the pack hierarchy, he argues that there are different types of dogs in a pack. Only a few dogs want to be leaders, and in his view, typical "alpha animals" do not exist anymore, as they have been bred away. Instead, there are somewhat stronger (more dominant) or weaker (more submissive) characters (Security, interview 32).

40 Of course, recent changes in German animal welfare legislation prohibiting training equipment designed to cause pain (such as prong collars) have made it necessary to invent new methods as well. All of this is easier to establish for sniffer dogs than for protection dogs, where the control of aggression is part of the job.

Seeing knowledge as something that is fluid and preliminary, we can see the figure of the "alpha wolf" reflected in the perspectives of the two handlers in different ways. Nonetheless, both of these perspectives lead to the conclusion that human domination over the dog is required. This is despite the fact that in wolf-related science, the idea of the single "alpha" that is a leader of the pack has long been refuted.[41] The idea still lives on, however, in part due to its strong narrative.

In thinking of the dog as a wild animal allows handlers to explain unfamiliar behaviour in the dog to themselves. The explanation that this is "just nature" helps them relate to their own reactions to it. Working with sniffer dogs coming from the "thinking about" cosmology makes the handler want to domesticate the dog. The "thinking with" cosmology, on the contrary, results in concessions when working with the sniffer dogs.

But there are commonalities as well, since in both ways of thinking the human handler speaks of dogs as if "they are all individuals" (Police, interview 33). Thus, even when they talk about the specific character traits of a certain breed, there is a common understanding that each dog has their own personality which may differ from the imagined breed-specific traits.[42]

Accessing Nonhuman Sensation in "Dances of Agency": On Reciprocal Sensing

Looking at the way sniffer dog teams interact will allow insights into the enactment of nonknowledge, since the specific ways of knowing—positive and negative—are on display in this practical human–animal encounter. As Karen Barad emphasizes, "[k]nowing is a direct material engagement, a practice of intra-acting with the world as part of the world in its dynamic material configuring, its ongoing articulation."[43] In scent work, this kind of reciprocal sensing and the expectations towards the other are clearly demonstrated as a dance of agency, as the following scene from a sniffer dog training shows:

41 See Peterson et al., "Leadership Behavior", 1410.

42 Warda, "Interspecies Emotion Management", 88.

43 Barad, *Meeting the Universe Halfway*, 379.

> We watch as a dog handler team under the supervision and guidance of an instructor runs through a detection test. The dog is left on a long leash and is not allowed to move until his handler says so. The handler shows the dog where to start searching — moving with two fingers along some objects that form the start of the search. (They call this "vorspuren".) Suddenly the dog stands very stiffly in front of the object — he freezes up to the tip of his tail. This is interpreted by the handler as the dog's having detected the odour that was the target of the search. The handler makes a sound with his clicker, signalling the dog to stop freezing. Then the dog receives a treat and, most importantly, gets effusive praise from his human partner. The handler rejoices loudly with the dog, moves with him, pats him, affirms him joyfully, and starts playing with him. It is this affection that the dog strives for, the handler tells me later. (Police, fieldnotes 1)

This description indicates the abandonment of a "preset taxonomic calculation"[44] within the situational encounter of the two entities. The thinking of genetic predispositions is deferred and replaced by sensation which shows that "thinking is the conceptual counterpart of the ability to enter modes of relation, to affect and be affected."[45] Thinking — with and about — becomes part of sensation. No matter how the human handlers think with or about the dog, the issue of whether they have a "cognizing mind" or not is secondary: "'minds' are themselves material phenomena that emerge through specific intra-actions", as Barad writes.[46] The handler and the dog communicate through multiple senses, through a form of immersion. Immersion can be understood as a "state of mind", a "trope of engagement", and sensation must then be understood as the bodily capacity "to resonate, to become more".[47]

Regarding "sensory attunement" as it appears in the fieldnote: Blattner as well as Fox et al. emphasize the role of embodied knowledge

44 Haraway, *When Species Meet*, 71.

45 Braidotti, *Posthuman Knowledge,* 124.

46 Barad, *Meeting the Universe Halfway,* 361.

47 Hayward, "Sensational Jellyfish", 173, 183.

as a joint experience within human–animal communication.[48] This is most noticeable in the exuberant reward parts in the above scene. In another instance, I observed a training situation where a handler was rather shy and quiet when interacting with the dog and was subsequently severely criticized by his instructor for not "giving him [the dog] enough" (Police, fieldnotes 1). The instructor called on the handler to behave more like a dog, a perfect example of the imperative to "be more dog", as Włodarczyk describes it. The performance of the required "boundless enthusiasm"[49] signifies a reward for the dog just as the act of playing does. Here the human anticipates what the dog likes, which leads to a strategic use of the playfulness as a reward within the training and then, later, on the job. Here also a crucial notion of the work-life regarding the work's influence on the private sphere becomes relevant. The handlers try not to play with their dogs at home, since playing is reserved for their tasks at work. For Fox et al., this points to the continuing power dynamics in teamwork: "[e]ven if non-coercive and playful, [they] are never entirely innocent and often work with canine sensibilities to shape their behaviour to human desires."[50]

In their interaction, the handler needs his or her body to meet semiotically with the animal partner during the detection procedure. But this communication does not always work. One handler I observed in a scent work test did not act on the physical hesitation of his canine partner and moved further in outlining the search trail (a technique knows as "*vorspuren*", or track modelling, see fig. 1). The human signalled the dog to keep on going, even though this was against the dog's initial will. This turned out to be a mistake and the handler did not pass the test. Attentiveness, trust, and a reliance on the other lie at the very heart of the teamwork.

This observation reveals two aspects: first, it illustrates the relevance of feeling rules, which guide the dog to show specific signs to indicate that they smelled the target scent but also instruct the human

48 Blattner, "Animal Labour", 107; Fox et al., "You Are a Dog", 430–33.

49 Włodarczyk, "Be More Dog", 40.

50 Fox et al., "You Are a Dog", 448. Cf. Warda, "Interspecies Emotion Management", 89.

partner to hold back with any emotional display so as not distract their partner. Instead, the human handler is guided into observing every bodily movement from their partner to interpret it closely. Once they miss even a tiny hesitation as in the example above, they run the risk of misinterpretation.

Second, it points to an ostensible paradox: "desired disobedience". When the dog was in the lead, the handler had to be attentive, and when this was not the case, the dog was supposed to resist the handler's inattentive behaviour to bring the human back on track. Dog handlers working for the German Customs described to me how they had to deliberately train the dog to assert themselves against the will of the handler (Customs, fieldnotes 17).

Haraway refers to the oxymoron of a "disciplined spontaneity" within agility training, which seems a similar training goal to the desired disobedience that I noticed in the field of sniffer dogs. Moreover, she also describes the interaction as a dance, when "[b]oth dog and handler have to be able to take the initiative and to respond obediently to the other. The task is to become coherent enough in an incoherent world to engage in a joint dance of being that breeds respect and response in the flesh".[51] Within the context of the dance, disobedience can be understood as the embodiment of confidence. Only when they feel confident with the handler will they resist their diverging signals. Explanations from the field included the importance that the dog keep their own will and follow it. The dog should stand up to the handler's commands if they go against his or her own instincts (Police, interview 33; see fig. 3). Others emphasize that what seems to be an act of "deliberate disobedience" is just work-related behaviour in which dogs decide when they can take the lead and when not:

> In reality the dog is not being disobedient, but rather does what he or she is supposed to do. The dog is asked to freeze in front of the odour of explosives, which he or she does. […] Dogs don't have a complex personality. They smell it—they show it. (Security, interview 32)

51 Haraway, *Companion Species Manifesto*, 62.

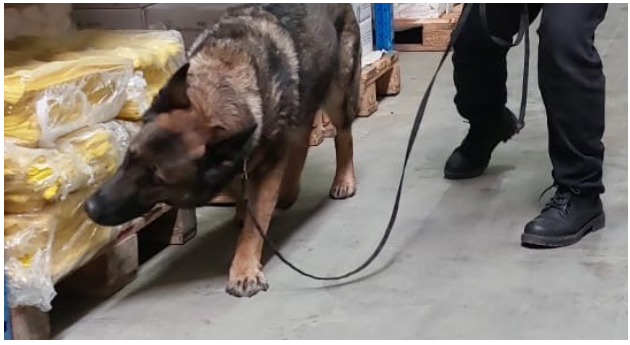
Even more in-depth was the exploration of a dog trainer at the Customs (Customs, fieldnote 20). He pointed out that on the one hand, there is obedience, with the characteristic that the dog knows what is required of them. This obedience entails commands and making sure that the dog does what the human signals them to do. On the other hand, there is the interrelation when the team is engaged in the search. It is then that the dog knows that they can take the lead. Therefore, they are not disobedient, but rather equipped with the power to take the lead and the knowledge about this empowerment. The term used for this is "Führigkeit" [biddability], which describes a specific eagerness to work with the handler, a voluntary docility, in which the canine partner offers their service in an unprompted and unrequested manner. Similar to how Włodarczyk describes it, many of the handlers considered their dogs to be the experts,[52] which legitimized them to take the lead (see fig. 2).

In the case of the immersion, interpreting the nonhuman animal through the sensorial encounter is "making sense through senses".[53] The different cosmologies lead to different interpretations, and this difference can be seen in the way the encounter is conceptualized. The immersion described at the beginning of this section is relevant in either way of thinking, but with a distinct contour. Proponents of the old-fashioned school of thought say that they have to get into "the head of the dog". It is the description of becoming a hybrid being, where the human is the brain, and the nonhuman the "eyes and nose". But instead of semiotically meeting like in a conflation as described before, here it is seen as a strategy to be on top of the dog's will, to be the alpha, and to ensure obedience. But it is also voiced as a desire to understand what the dog is thinking and to be able to spot early when the dog starts refusing to work. This refusal is something Blattner would consider an important way for the animal to express dissent.[54] Some handlers emphasized the importance of the leash as a means of communication: "The leash is like a telephone line that signals what I want" (Police, interview 3).

52 Włodarczyk "Be More Dog", 41.

53 Hayward, "Sensational Jellyfish", 183.

54 Blattner "Animal Labour", 99.



Figures 1–3

Fig 1. I show him where to sniff.
Fig 2. The expert takes the lead.
Fig 3. He stops while I keep moving

These images are part of my participant observation within the sniffer dog training. The dog performed professionally with me being a stranger to him.

These kinds of reflections are supported by the sniffer dog handler literature, which emphasizes the interspecies perspectives, namely, that of thinking of oneself in line with the animal partner. "In detection, it is important to view the search environment from the individual canine's perspective."[55]

The immersion then also takes place on the part of those who prefer to "think with". Here they reflected on their encounter more closely in line with the way that Eva Hayward describes it, in which they "do not conflate but meet, 'intra-act', in the sharing of the world".[56] The situational emerging and reciprocal responsiveness in intra-action requires an openness to the sensation of the animal partner on the part of the human. It then seems that both entities attempt to assume the perspective of the other in this joint action. They are in the intra-action of detection, they are in a mode of mutual sensing which forces them to open up, regardless of their style of thinking. Braidotti's term of "knowledge collaborators"[57] appears to be a fitting description for this.

The dance metaphor, once again, aptly describes the role-shifting that takes place in the human–dog interaction when they switch leadership. This is true for very different sniffer dogs' engagements. "In tracks, the handler gives up the lead and the dog takes over. The dog decides" (Police, interview 3). This kind of autonomy, letting the nonhuman make their own decisions, is part of what Blattner calls for to ensure that work is a "meaningful activity".[58]

Furthermore, in the explosives detection action, the dogs have to take the lead in indicating where they have smelled the target odour. Thereby the dogs use their professional emotional display in freezing from the tip of the nose to the tip the tail and await the reaction of their human partner. The handler must recognize the indication and release it with a sound of their clicker, followed by a reaffirming

55 Waterbury and Schultz, "Handler Perception", 442.

56 Hayward, "Sensational Jellyfish", 175.

57 Braidotti, *Posthuman Knowledge*, 112.

58 Blattner, "Animal Labour", 95.

appraisal. Here, visual bodily signals meet with acoustic ones.[59] The shifting of agency — the dogs taking the lead, then awaiting the human's reaction — is imprinted by a reciprocal expectation, which is expressed in a learning guide for detection dog trainers as follows:

> [T]he trainer waits for the dog to *offer* a desired action. The dog is the initiator of actions, and the trainer is a passive participant who provides rewards when the action is offered. *The dog is in control of the learning process.*[60]

Learning in this new interactive, collaborative process is no longer guided (solely) by getting the dog to do what they would not do otherwise. The process is not just about learning with, but also from the dog.[61]

Confidence in the dogs and their will to work for the human partner ("the dog's inner motivation to do something for us", Police, interview 3) is the basis of the interaction, which is often referred to as the necessary "social bond" (Police, fieldnotes 1). Work here can be interpreted as a liberating proposition,[62] or at least as benefiting the animal, since it is part of the sociability within the team relation. "'Trusting' one's dog entailed knowing how the dog responded in specific situations, knowing how to 'read' the animal, and sharing a bond of mutual confidence".[63] For this interpretation to become possible, the human handler has to consider all the obstacles and distractions affecting the dog's work task (the presence of different odours, and other distracting aspects). Therefore, human handlers have to consider how the canine partner interprets the environment. The "reading" of each other takes place in the "zones of intersection where the non-human world enters constitutively into

59 In her autoethnography of guide dogs, Warda highlights the relevance of acoustic emotional displays "beyond speech and intonation" within emotional labour. See Warda, "Emotions at Work", 5.

60 Fjellanger, "Learning Principles", 14; emphasis in original.

61 Włodarczyk, "Be More Dog", 45, 46.

62 See Porcher and Estebanez, "Animal Labor", 24.

63 Sanders, "Ambivalence", 166. See also Haraway (*When Species Meet*, 242) who views trust as inseparable from responsibility "for and to one another".

the becoming of the human world and vice versa."[64] This is the zone of reciprocal access that Roepstorff describes as a form of "semiotic competence", which can be seen as the "use of the competence and interpretation of a species to get knowledge about something that is invisible to humans".[65]

In the zone of intersection during the detection process, it seems that after the dog indicates a target, they become the passive part of the team, waiting for the human to act. When taking the idea of the dance seriously, one must understand that the waiting part is also active. For the dance to develop, both partners must alternate in activity, wherein "passages of human passivity are precisely passages of material activity",[66] which, here, can also be applied to the nonhuman animal. This form of active passivity, such as waiting for a dance partner's action, might be described as "a roundabout or deferred way of acting oneself".[67] In this case, the role of the active partner is to expose oneself to the activity of the other, and to allow the other to affect oneself. The dance of agency in the sniffer dog teamwork becomes a routine interaction, which manifests in interactionist spaces of mutual understanding. In these encounters, intra-active knowledge, positive and negative, is mutually disclosed.

(In)tangible Knowledge

The disclosure of unknowns that takes place in the manifestation of the dance, in the sensation and immersion, can be understood as ontological nonknowledge that is enacted in a number of different ways. At first, nonknowledge entails the central question of what it is that the dog can smell. How this kind of nonknowledge is perceived on a scientific basis depends a great deal on the epistemological background chosen. It could be seen as a knowledge gap that can possibly be filled; or as knowledge that can be made explicit by science in principle, as would occur when smell analytics develops to the point of being able to capture the olfactory capacity of dogs. In this case,

64 Pickering, "Material Culture", 196.

65 Roepstorff, "Thinking with Animals", 206.

66 Pickering, "Material Culture", 195.

67 Sloterdijk, *You Must Change*, 374; translation modified.

smelling would be understood as a purely biochemical and biophysical procedure. As an example, there have been many attempts to recreate the way a dog smells using bio-mimicry approaches. One unique capacity of dogs is their ability to detect more particles than any artificial device, due to their specific way of circulating the air through their noses while sniffing. At the same time, dogs can distinguish the distinct components of odours, something that constitutes one of the biggest mysteries for those working and researching in the field. The question remains, how does the dog separate the pieces and reassemble them to recognize a certain target substance?

Individual senses are never engaged alone — rather, they are accompanied by other senses. Even when considering the biophysical and neurobiological side of things, when it comes to smell there are diverse influences at play. Smelling is not just an act of sniffing, but rather an act of "practical intelligence".[68] Cognitive ability is just one part of smelling, while the effect of outside influences is the other; as a zoological researcher explained to me: "You don't always smell in the same way. No, sensory perception is significantly affected by external factors and internal factors" (Researcher, interview 36).

The question of how the dog can differentiate distinct parts of the odour can also be understood as negative knowledge with the reflection on the preliminary limits of scientific endeavours or, in other words, as a knowledge that is yet to come. It is important not to see this form of nonknowledge as a gap, but rather as productive in its own way. The difficulty that arises from this is that nobody can say for sure what the stimulus for the dog's reaction is. Is it the odour of the sample carrier, adulterants, the targeted scent? Or is the dog reacting to something that they recognized in the handler? But then, it is here that within the steady human-animal encounter a certainty develops that the knowledge about the scent differentiation is there or will be there.

The actual training of the dog towards identifying a substance only takes a couple of days, since the dog is capable of memorizing

68 Mouret, Porcher and Mainex, "Police Dogs", 133.

different odours very quickly. It is the learning to read one another within the team and to grow together that lies at the core of the training. One such course takes around seven weeks. The interviewees reflected that especially the human needs time to learn how to read their animal partner. Accordingly, the responsibility for any kind of error was said to lie "100 percent with the human" (Police, interview 3).

Nonknowledge is also deliberately and productively enacted as a method. To ensure that the dog does not get any cues in the form of nonverbal signals from the handler (no cheating through influences by the handler), nonknowledge is installed as a principle in the training and tests through including only non-involved, non-informed persons in the procedure (so-called "double blind") (Police, interview 1).

But nonknowledge also lies within the encounter of the dance. Those who work in the field ask themselves, "what is my partner smelling?" This was a repeated question of a leading dog handler from a security company with more than forty years of experience (Security, interview 34). What is registered by the dog's multiple senses cannot be grasped by the human, since the mind of the animal partner is inaccessible to them: "we can never be sure what we are conditioning for" (Police, interview 3). This is also highlighted in the scent work literature which emphasizes that the human handler needs to be "cognizant about how environmental stimuli may be perceived differently" by their nonhuman partner.[69]

The dog handlers' lack of explicable, cognitive knowledge enmeshes with a sensual understanding of what the canine partner knows. A tacit knowledge is already there but it is intangible. The tacit, negative knowing of the nonhuman partner's views is enacted through the routinized experiences of observing the dog, and trying to learn how the canines behave in different situations. This enacted tacit knowledge is shown in the handler's confidence in the dog's capability of smelling what is at stake. It is part of the "negotiations", as Coulter calls them, in which the animals "make their views known".[70]

69 Waterbury and Schultz, "Handler Perception", 442.

70 Coulter, "Humane Jobs and Work-Lives", 37.

Tacit knowledge is also acquired in experiments. It is here that the handlers learn new capacities of the dog, without really knowing how the dog can do this. The confidence or trust, not just in the capacity of the dog, but also in the actual team-performance, is based on the individual tacit somatic knowledge of each handler towards the individual dog. The capacity for social interaction, for reading one another, and for becoming immersed is something peculiar to sniffer dogs when compared to other species with the same high olfactory capacity, but without the social bond to the human (e.g. bees). This ability to socialize, as well as the manifold relations that a canine has with a human, is how Benjamin Meiches explains the "dog's capacity to produce more joyful work."[71]

Clinton Sanders emphasizes the ambivalence of the work regarding his case of K9 and patrol dogs, where the handler had to see the dog partially as an object (a supporting tool) because of the formal requirements of the field, but simultaneously saw them as a companion and developed a social relationship.[72] Sanders observes that the canines are only an instrument for their teammate by purpose, not by nature. In my field visits, the handlers self-consciously confronted this ambiguity: they were responding to their partners' individuality.[73] Even when they were reflecting on the nonhuman partner as a companion, the use of technological vocabulary to describe the canine was common. Handlers referred to the dog as needing to be "calibrated" (Security, interview 34), to be "switched on" and "off", and to get information on their "motherboard" (Police, fieldnotes 1). This might be an expression of the ambivalence that the human–animal work relationship embodies. In particular, police and customs officers who have to differentiate between a strongly regulated working environment and private work life with the dog have to find a way to cope with the ambivalence this causes. The metaphorical[74] reflection on their partner

71 See Meiches, "Non-Human Humanitarians", 7, 17.

72 Sanders, "Ambivalence", 168.

73 As in Włodarczyk "Be More Dog", 44. See also the balancing of the dog's personality in Ahto-Hakonen and Hakonen, "All Fun and Games", 734.

74 For the "metaphorical dog" see Ahto-Hakonen and Hakonen, ("All Fun and Games", 733), who focus on the professional demands of the team as medium and tool.

can thus be seen as a result of the instrumental language of being embedded in the work environment. Equally, it seems to be a way to cope with the intangible knowledge of their teamwork, as technologies seem to offer a transparency that another living entity does not.

Concluding Thoughts

"What happens if the working animals are significant others with whom we are in consequential relationship in an irreducible world of embodied and lived partial differences, rather than the Other across the gulf from the One?"[75] This question posed by Donna Haraway marks a crucial point, since the dog handler team in the airport security field is characterized by the ambiguity of building a bond that must be effective during work hours but also transferable into the private sphere. This necessary bond and reciprocal reading of the two entities means they are both indispensable for detection work. This foundation of positive and negative knowing within this interactive work, through crucial mutual understanding, makes them targets for debate within the larger discussions on the canines' value as biotechnology[76] within state services.

Roepstorff emphasizes that the question of how animals are perceived ultimately becomes a question of "from within" versus "from without". The key points in these cosmologies are represented in discussions concerning differences or similarities in the "other", questions rooted in how we conceive nature and culture. When we hold on to a classic biology-dominated, as opposed to a bio-semiotic, perspective, it helps us to "reconfigure the border between humans and nonhumans".[77] On the contrary, encompassing the world as "natureculture", in which we emphasize the similarities with other beings, allows one to think *with* animals. The dichotomy of "thinking with" and "about" animals, as the sniffer dog teams example shows, is rooted in tacit knowledge, drawing on experience and observations. As such, it is enacted in the entangled dance of the human–animal ensemble.

75 Haraway, *When Species Meet*, 72.

76 Porcher and Estebanez, "Animal Labor", 17.

77 Roepstorff, "Thinking with Animals", 214–15.

But the scent work field is still characterized by parallel cosmologies. The shift in the dog training field towards a more empathetic perception of the nonhuman animal has an impact on scent work within state service. Its specific, yet still messy reality embodies this "shift from instrumental to affective dog–human relations".[78] When following the logic of seeing the animal partner as an instrument, this is accompanied by a deep scepticism toward embodied knowledge per se. But even so, human handlers must open up to their partner when entangled in the encounter, to engage in the bio-semiotic dance. This dance requires confidence in each other's performance, by mutual attentiveness to, and engagement with, every little movement, and a "performative finding out about and accommodation to the other".[79]

Following a "thinking with" thought style builds trust in the unknown capacity of the other and leads to a "becoming-with", which grants a degree of sensitivity for new forms of knowledge. Therefore, differing worldviews become the background which contributes to the acknowledgement of the working other. It becomes evident that the nonhuman animal partner is not just dependent on instincts, but rather also on "social competences".[80]

Increased attention and openness towards the otherness of the canine partner becomes vivid when the most recent scent work literature argues for the necessity of the handler to understand ("tune in" to) the animals' perception of their surrounding world, which is seen as being "defined by their senses, experiences, and needs".[81] Besides an openness to more "dogness", there is also a requirement to acknowledge the canine's professional skills as shown in their emotional labour. To recognize their professionalism in differentiating it from other notions of emotion work means to acknowledge them as professional workers indeed. Consequently, this allows for a step towards more humane jobs and work-lives for animals.

78 Charles et al., "Fulfilling Your Dog's Potential", 192.

79 Pickering, "Material Culture", 202.

80 Porcher and Estebanez, "Animal Labor", 26.

81 Waterbury and Schultz, "Handler Perception", 442.

By admitting to this enaction of nonknowledge, and comprehending what is relevant for the dog, one approaches Thomas Nagel's classic question of "what it is like for a bat to be a bat"—or, in this case, "what it is like for a dog to be a dog?" With this ongoing challenge, the human handlers will assure an "openness to emergence and what the world has to offer",[82] knowing that the answer will remain cognitively intangible, yet can still constitute a way of knowing.

82 Pickering, "Material Culture", 202.

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