

1 **“Bats Who Harm” and “Bats Who May Be Harmed”:** 2 **Interspecies Politics of Virus Sampling**

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4
5 **Abstract:**

6
7 The 2013–2016 Ebola virus outbreak in West Africa galvanized a quest for more
8 knowledge with regards to the ecology of the disease. In its immediate aftermath,
9 research initiatives, at the junction of biosecurity and One Health, were mounted to
10 elucidate the circulation of the Ebola virus and other emergent pathogens through
11 sampling local wildlife, in particular bats. The article investigates the knowledge, affects,
12 and practices mitigating care and risk in encounters between human animals and
13 potentially contaminated nonhuman animals. Grounded in an ethnography of the labor
14 of wildlife sampling by Guinean veterinarians, it adopts an interspecies perspective on
15 the One Health laboratory, a place where relations between animals and humans are
16 inflected by a postcolonial, gendered, and anthropocentric imbalance of power. It argues
17 that, rather than blurring interspecies boundaries, scientific care for sampled bats may
18 cement hierarchies, with consequences for samplers and animals.

19
20 **Keywords:**

21 Postcolonial; One Health; Laboratory; Zoonosis; Hierarchy; Entanglements; Sentinel;
22 Biosecurity

23

24 **Introduction**

25

26 The 2013–2016 Ebola virus outbreak in West Africa galvanized a quest for more
27 knowledge about the ecology of the disease. In its aftermath, the United States and
28 European countries mounted scientific initiatives to elucidate the circulation of the virus
29 and other pathogens in wildlife. These endeavors build on the post-Cold War concern for
30 population biosecurity and the global health concern for disease outbreak preparedness
31 that have prevailed since the 2003 SARS epidemic. But they also invoke the newer
32 rhetoric of “One Health,” a framework for action based on the idea that the health of the
33 environment, human and nonhuman animals is interconnected. This article investigates
34 knowledge, affects, and practices at this junction of biosecurity and One Health, in
35 encounters between human and potentially contaminated nonhuman animals. It is
36 grounded in an ethnography of wildlife sampling by West African veterinarians, and
37 sketches the choreographies of care of vulnerable professionals for vulnerable beings.
38 Sampling for zoonotic disease surveillance presupposes that the frontiers between
39 species are permeable, and samplers do tinker with the border between humans and
40 wild animals. But I argue that rather than blurring boundaries between species, scientific
41 care for sampled bats cements hierarchies between species in postcolonial settings.

42

43 The origins of the West African Ebola epidemic, the first one recorded in the region,
44 have not been clarified to date, although the scientific consensus points to human
45 contact with insectivorous bats in Guinea as the likeliest source of infection (Sáez et al.,
46 2014). Many unknowns persist concerning the wildlife dynamics of the Ebola virus

47 disease, including its animal reservoir: Hypothetically, one or several bat species would
48 harbor the virus without symptoms and transmit it to other hosts (Ohimain, 2016). Since
49 the first outbreak in 1976, disease ecologists have sampled several thousand animals to
50 make inferences about the reservoir status of certain species from testing a portion of
51 their population. Sampling efforts have concentrated on bats since 2005 and the finding
52 of Ebola virus RNA in one species of fruit bat. Trapped or purchased animals were
53 euthanized and dissected until the 2000s (Olson et al., 2012), but scientists have started
54 sampling bats on a much larger scale since 2015, and increasingly take what they
55 conceptualize as “animal welfare” into account. As evidence of that concern, in 2011, the
56 Food and Agriculture Organization (FAO) published a manual on “balancing ecology,
57 conservation and public health interest” in emerging zoonoses investigations on bats
58 (FAO, 2011). The guidelines recommend the use of “non-destructive sampling methods”
59 when possible, yet “scientists capturing bats for disease surveillance must consider the
60 safety of both the field personnel and the bats being sampled” (p. 51).

61

62 The COVID-19 pandemic has brought the role of bats as zoonotic disease reservoirs to
63 global attention. Bats have been framed as first-class epidemic “rogues” (Fairhead,
64 2018) in spite of lacunas in knowledge about the ecology of the SARS-CoV-2 virus.
65 Depicted as “harmful” to humans, they become animals against whom harm is
66 justifiable, through ad hoc or state-mandated culling operations, for example. But in
67 parallel, the media present these harmful encounters as revealing of the dangers of the
68 Anthropocene, as bats are particularly vulnerable to anthropogenic pressures on their

69 habitat and need protection. This article analyzes the tense equilibrium between what it
70 conceptualizes as different ontologies, laid bare by scientific work with these animals.

71
72 It relies on a detailed ethnographic study of an invisibilized group of One Health workers:
73 wildlife samplers. I conducted 16 months of doctoral fieldwork with a group of them, all
74 Guinean professionals in veterinary medicine, biology, or forestry; mostly men,
75 employed for capturing and sampling more than 4,000 bats and rodents. In 2017–2019,
76 after gaining the authorization of their field managers, I actively participated in their
77 activities, repeatedly interviewed them on and off the record, and developed
78 interpersonal bonds during and beyond fieldwork. Being funded by a research grant from
79 my home university in the United Kingdom, I was able to orient my questioning
80 independently from the foreign institutions steering such projects: I was primarily
81 committed to the samplers' perspective and hypothesized that their work transformed
82 their relationship with bats. I found out, in fact, that they develop a conflicting
83 relationship, fraught with species and racial inequality, with two intertwined bat figures,
84 whom I call the “bat who harms” and the “bat who is harmed.” I use these insights to
85 question the consequences, both for workers and for animals, of operationalizing the
86 One Health discourse in postcolonial contexts, an endeavor bound to expand following
87 the COVID-19 epidemic.

88

89 **On Interspecies Boundaries in the One Health Laboratory**

90

91 Considerations for the wellbeing of collected bats stems from concerns for animals used
92 in experimental settings, which arose in mid-19th-century Britain, and the more recent
93 focus of veterinarians on the pain of wild animals. But they are even more directly
94 indebted to the One Health agenda, endorsed by most contemporary large-scale
95 sampling projects such as the ones discussed here. One Health is a conceptual
96 approach to zoonotic disease emergence that advocates collaborations across the
97 sectors of human, animal, and environmental health to prepare for epidemic outbreaks
98 (Bardosh, 2016). The concept, genealogically related to veterinary epidemiology, was
99 rebranded at a 2004 symposium hosted by the US Wildlife Conservation Society as a
100 model in itself, generating countless publications, platforms and initiatives across the
101 world. In 2005, the global spread of the epidemic of H5N1 avian influenza acted to
102 accelerate the endorsement of this rhetoric by donors, governments, and United Nations
103 agencies. After experiencing epidemics of avian origin, in the 2000s, China and
104 Southeast Asia initiated major reforms to their systems of zoonotic disease surveillance
105 and control to integrate actions across the human-animal-environment interface (Keck,
106 2015). In Africa, the advent of similar sociotechnical dispositives in the 2010s rather
107 came as a response to outbreaks of diseases originating in mammals and not birds,
108 such as the Ebola virus disease. Surveillance through data collection, zoonosis
109 research, and epidemic investigations in Africa have thus primarily focused on primates,
110 rodents, and bats.

111

112 Social scientists have acknowledged the shift, with One Health, from a focus on “human-
113 animal contact” to the recognition of porous boundaries between human and animals,

114 and the social relations that mediate them (MacGregor & Waldman, 2017). The concept
115 forges alliances between biosecurity, where human health benefits from animal health,
116 and biodiversity, where animal health matters in itself. However, in spite of One Health's
117 insistence on inclusivity and interconnections (Craddock & Hinchliffe, 2015), the agenda
118 tends to emphasize the role of animals, in particular those categorized as "wild," as
119 transmitters of disease (Cassidy, 2018). For animals such as bats, primates, and
120 pangolins, One Health holds care in a balance with risk.

121
122 One Health field research on emergent zoonoses produces a particular kind of
123 laboratory. For social scientists, a laboratory is a fact factory where scientists can
124 manipulate objects in standardized ways and produce knowledge through practice. In
125 animal research labs, as emphasized by feminist scholarship, animals are not passively
126 submitted to the objectifying gaze of laboratory scientists (Davies et al., 2018). Animal
127 research is a place of ethical encounters, where care practices interlace moralities,
128 regulations, and technologies. In her ethnography of lab science in the United States,
129 anthropologist Sharp (2018) underscores the power of animals, especially mammals, to
130 "reshape moral worlds" through their intimacy with lab workers (p. 3). In the One Health
131 lab where I conducted research, however, people caring for animals who are not bred
132 and are only detained for up to a few hours do not accrue long-term responsibilities
133 toward bats: The latter are very much reduced to instrumental calculations (Weisberg,
134 2009). Ultimately, boundaries between humans and animals – i.e., their difference and
135 embedded hierarchy – are not only tested by lab work, but they may also be reinforced.

136

137 The One Health laboratory investigated by this research is situated in a Global South of
138 supposedly high interspecies intimacy (Hinchliffe, 2015), where resource extraction has
139 historically dominated exchanges. It is a site of postcolonial power struggles, where
140 geopolitical inequities, the legacies of racism, and material scarcity configure the
141 desirability of certain human-animal entanglements. Such a political emphasis is
142 encapsulated by Livingston and Puar's (2011) concept of "interspecies." In several
143 biopolitical processes such as pest control or taxonomy decisions, the authors contend,
144 the rights of some humans are elevated above those of nonhuman animals. Taking an
145 "interspecies" perspective on One Health lab work with animals thus means being
146 attentive to the ways in which biopolitics suffuse the redrawing of inter-species
147 boundaries through experimentation and care. By diffracting the animal sampled within a
148 One Health context, I underscore their dual ontology and emphasize the agency of
149 singular bats in enacting these relations: Bats are a risk to human health ("bat who
150 harms"), while their health is also endangered by human activities ("bat who is harmed").

151

152 **Care as Biosecurity**

153

154 Every mission day around 6pm, the agents carried heavy crates from the project's four-
155 wheel drive to the site reconnoitered earlier as auspicious to bat populations. They
156 planted a few poles, between which they pulled taut six-meter-wide polyester nets. As
157 dusk set in, one bat, then two, swooped from their perch; some flew down into the net
158 and were trapped. "Capture!" When two or three bats were caught, two agents quickly

159 donned personal protective equipment, before the flailing animals snarled up too tightly.
160 One agent carefully detangled the fragile jumble of hair, bones, and claws, taking up to
161 several minutes. As I had gained the approval of their Guinean managers to join the last
162 sampling missions, the agents were eager to perform professionalism in front of the
163 French student, lest I may, perhaps, make a negative report to their superiors, or worse,
164 the US scientists overseeing the initiative. The task requires ability and gentleness for
165 the net should neither be torn, nor the bat hurt. A bat's wings are difficult to separate as
166 their thinly stretched skin, if perforated, would impair flight and compromise the animal's
167 survival. The bats were inserted in cotton bags hung off a branch, "so they feel
168 suspended" until sampling, the samplers imagined. The protocol then required that
169 "every captured animal [be] released into its natural life habitat" after receiving fruit juice
170 and a period of observation.

171
172 Most agents in wildlife sampling projects in Guinea are professional veterinary doctors
173 trained at the country's *Institut Supérieur des Sciences et de Médecine Vétérinaire*, one
174 of two veterinary schools in Francophone West Africa, founded in 2006.¹ The curriculum
175 interweaves disease control and commercial livestock production, a structuring
176 connection for the development of veterinary medicine in the former French West Africa
177 (Landais, 1990). During their training, in the 2000s–2010s, sampling agents did not hear
178 about One Health, nor were they taught much about wildlife health. Wildlife only made a
179 brief appearance in the course on infectious pathologies: They were, rather vaguely,
180 depicted as "disease reservoirs." As it happens, in the international development of the
181 One Health approach, veterinary epidemiology similarly overcame the concerns of

182 wildlife veterinarians (Cassidy, 2018). In West Africa, the veterinary profession's
183 structuration dovetailed with veterinary predominance in One Health to influence the
184 implementation of the agenda.

185
186 Sampling agents were trained to handle bats – whom they had hardly manipulated
187 before – following a strict bioethical protocol in line with the One Health concern for
188 “animal welfare.” Adapted from manuals for zoo and wildlife veterinarians and approved
189 by a university animal care and use committee and the national authorities, it prescribed
190 “the most humane and least invasive techniques to sample wildlife while minimizing pain
191 and distress.” “Humane” care mostly amounts to technical specifications: The sampled
192 blood quantity is limited to 1% of the animal's body mass and anesthesia is to be
193 avoided, for overdosed anesthetics can be fatal to small bat bodies. In addition, animals
194 should “neither be stressed nor kept for long,” although no indicators for animal distress
195 are routinely used by the samplers. The protocol also demanded that “disturbance of the
196 social groups/colonies and their habitat” be “minimized,” e.g., by releasing animals within
197 one kilometer of the site of capture. These bioethical principles interweave two doctrines
198 of animal health, detached from questions of individual wellbeing: Animal welfare is
199 interested in preserving the biological life of the animal, while wildlife conservation is
200 attentive to species ecology. The field agents collapsed both in an expression
201 highlighting the anthropocentric character of prescriptions: “We are told to treat animals
202 humanely.”

203

204 These requirements are held in tension with those imposed by another bat figure, that of
205 the “bat who harms.” Although the protocol estimated the prevalence of rare pathogens
206 in bats to be “between 0.01 and 1%,” samplers were taught to observe biosecurity
207 precautions, i.e., measures for protecting themselves. Once transferred to the sampling
208 space, the bat was subjected to the taut attention of agents dressed in full-body
209 protective equipment, seated in an area delimited by security tape. One agent took the
210 bat weight by means of a portable scale, read through their face shield. Another took the
211 bat out of the bag by the collar so as to prevent them from turning their head and biting.
212 They presented the animal to a third agent who determined their sex, age, and if
213 possible, their species, measured their forearm, and inserted cotton swabs into their
214 mouth and anus before puncturing the brachial vein to collect a few drops of blood.
215 While handled, the bat pants, squeaks, and squirms in an attempt to break free, their
216 mouth open and ready to bite. The bats’ sharp teeth provoked much apprehension
217 among agents as they can easily pierce through several layers of glove. Thus,
218 responsibility for biosecurity is not solely delegated to protective equipment. Good
219 handling technique is key: “In certain contexts, care is precisely what enables the
220 instrumentalization of life” (Giraud & Hollin, 2016, p. 31). The human’s role of care for
221 the “bat who is harmed” is to smooth the experimental process by ensuring the animal’s
222 compliance, not to foster a relationship wherein they try to adopt the animal’s
223 perspective.

224

225 In the field lab, techniques for bat containment are not consecrated requirements, but
226 objects of negotiations that consider the vulnerabilities of sampling agents and bats, who

227 may both harm and be harmed in their meeting or as a result of it. For example, while
228 handling fruit bats, robust gloves made of yet another animal body part – leather – are
229 worn over nitrile gloves to prevent exposure to bites. A flipside of this protocol is that it
230 diminishes the sampler's sensitivity, increasing the risk of harm to the bat. Some
231 samplers judge that their handling skills suffice to handle the animal without incurring or
232 inflicting pain, and most importantly, to enable the procedure to which bats are
233 subjected. This is part of the workers' tacit knowledge: Attunement to animal bodies may
234 lead to eluding procedures and "tinkering" with socio-technical infrastructures (Law,
235 2010). This process is notably facilitated by the commodification of cow skin in the form
236 of leather gloves, making the "harmability" of yet another animal a protection for
237 pathogenic interspecies contact.

238
239 Social scientists looking at care for animals targeted by biosecurity systems portray
240 zoonotic disease management as a form of biopolitical contest between two visions of a
241 "good death" for animals on farms (Porter, 2013). This form of care, although it still relies
242 on animals' inequality with humans, evades the biopower of state-mandated culling and
243 takes place "despite biosecurity." What Guinean samplers perform, however, is less akin
244 to "care despite biosecurity" than to "care as biosecurity." In fact, within the One Health
245 paradigm, bats are cared for because of the risk of cross-species infection and their
246 operation as "sentinel devices" in the words of anthropologist Keck (2015). "Disease
247 sentinels" are technologies of biosecurity surveillance which track the circulation of
248 pathogens in and among their spatial reservoir(s). Keck (2015) moves away from a
249 biopolitical framework to cast the relations between power, care, and nature as an

250 exchange of perspectives, whereby “letting live” sentinel birds “becomes a way to make
251 [humanity] live” (p. 229). The wellbeing of the animal, their very freedom, grants their
252 future capacity to mingle with fellow nonhuman and human animals, and to send
253 humans further signs of an impending epidemic through sampling. Consequently, the
254 vulnerabilities of bats and humans are not negotiated as a by-product of sampling, or the
255 interference of an alternative model of care: The very ethical configuration of One Health
256 sampling, its mode of “caring as biosecurity,” forces samplers to both care for and
257 protect themselves from “bats who harm” and “are harmed.”

258

259 **Interspecies Encounters and Hierarchy**

260

261 In West Africa, bats can hardly be said to possess the “nonhuman charisma” of big
262 mammals of interest to international conservation programs, such as elephants.
263 Geographer Lorimer (2015) proposes that animal charisma is shaped by embodied
264 encounters, ecological and aesthetic, and their valuation in a given political economy.
265 Thinking with this concept, bats have, overwhelmingly in Guinea, a “negative charisma.”
266 Considered a rare delicacy, the meat of fruit bats is hard to find in local markets. All in
267 all, few people corporeally interact with them – except for fruit bat hunters and children
268 who like to capture and play with insect bats. In 2019, no bats were on the list of
269 protected species established by decree in Guinea, and bat hunting was not legally
270 banned. Ecologically, bats are the object of a “pestilence discourse” (Knight, 2000).
271 Insect bats roosting under house roofs are a source of noise pollution, and their

272 droppings and urine leave a foul smell and dark marks. Their nocturnal habits, which
273 trouble people's sleep, give way to beliefs that they may be metamorphosed witches.
274 People have developed techniques to force them out of roofs or seal separations. As for
275 fruit bats, they damage crops and are kept at bay through hunting. Finally, bats' liminal
276 anatomy, half-bird half-mouse, is the topic of a few origin myths, which present it as the
277 outcome of a sociomoral fault which earned them the status of outcasts.

278

279 Bat samplers shared these negative feelings towards bats, although they were among
280 the few to interact with them alive. They constantly described them as "unsightly" and
281 "cunning," and bats were the target of dark humor while on the sampling table. Female
282 vets did not participate in restraining the bats, an exclusion which naturalizes women's
283 vulnerability to "wild" animals. This gendered division of labor may also explain the
284 nature of bat jokes, which pivoted around their corporeal affordances for human
285 consumption ("Keep this one for my soup after sampling!"). By extension, the male
286 agents I knew fantasized being chased by the women living in sampling sites, whom
287 they assimilated to bats. The metaphor, overlapping animals and women as absent
288 referents, gave fodder for many puns involving spreading out one's "nets" in local bars to
289 catch and "thump fat bats," etc. This misogynous banter naturalizes the social order and
290 subordination of rural women to middle-class male vets.

291

292 These affects and their sensory lifeworld make the demand to "treat bats humanely"
293 utterly incongruous, even if the limited care demanded remains quite anthropocentric.
294 The discordance was most significantly brought out by a fatal incident at the inception of

295 the project. The field coordinator accidentally killed a bat while handling the animal. His
296 distress at such a breach of protocol led him to offer his condolences to the team and
297 call the country director to report the accident. But he and the sampling agents loudly
298 laughed when later recollecting the incident. Likewise, affectionate gestures – such as
299 petting a bat, or blowing to warm them – were derided, though they were sometimes
300 facetiously performed with a look in my direction. One does not bewail a bat's death, one
301 provokes it – and the look emphasized the intentional opposition of this attitude to a
302 supposed Western empathy for bats. Bats' negative charisma, affordances as food, and
303 assigned inferiority naturalize their ontology as the “bat who is harmed.” Laughter also
304 channeled anxiety with regards to the precariousness of the agents' employment,
305 seemingly subordinated to caring skills.

306
307 Nonetheless, something else happens on the margins of the One Health laboratory.
308 Care as practiced in the field laboratory differs significantly from care in the release of
309 sampled animals. What happens after the bat is bagged again, away from the lab's
310 lights, is not codified by the protocol. Some agents unceremoniously shook bags open
311 so that the bats fell flat on the ground and crawled into the darkness. But they preferred
312 not to release animals in the vicinity of the inhabited sites where they captured them, as
313 they feared that their gesture could be interpreted as releasing injected viruses. As a
314 consequence, Omar, a forest warden with a professional commitment to wildlife and, as
315 he says, a “personal affection” for bats, embarked with the bagged animals and drove a
316 few hundred meters down a bush road. Once away from prying eyes, Omar took the
317 bats out of the bags, one by one. If they did not immediately take flight, if they looked a

318 little disorientated and weak, he carefully placed them on a tree trunk. If he laid them on
319 the ground, they could be eaten by snakes. Sometimes, when he opened the bag, he
320 found them dead, after losing too much blood or being bagged for too long. Once, Omar
321 had just released an animal when an eagle dived and snatched them. This death
322 touched him deeply because he “believ[ed] in fate.” “Yes, we removed them from their
323 environment, but if we had not trapped them today, another predator would have. You
324 may take many precautions while sampling, and release the animal in a proper place,
325 but they had to die that day.”

326
327 Omar's gesture, while being accompanied by partially caring acts, reaffirms the equality
328 of all species in the face of death. Through his employment as a forest guard, Omar
329 encountered many accidentally ensnared animals, such as birds. But he did not act on
330 his overwhelming pity to convince hunters to position their traps differently or release the
331 unfortunate beings. His interventionism bowed to what he perceived as the godly law of
332 “fate,” or as other samplers would put it, “luck.” His skilled labor is in line with the logic of
333 “care as biosecurity” and the objective of sampling which is to convert “furry animals”
334 into data (Birke, 2011). It does not aim to defy the perceived naturalness of the mortality
335 of all lifeforms. Likewise, US researchers working with animals subjected to
336 experimentation contrast life in nature as brutish and short, compared to the “good life”
337 furthered through humane treatment in laboratories (Sharp, 2018, p. 42). Omar would
338 have certainly agreed, although bats did not dwell on his sampling table like monkeys in
339 research labs: Animal lives have more value in the sampling setting than in the wild.
340 Thus, liberating the bat is not returning them to a state of freedom from science but

341 releasing them from a space of controlled protection. Nevertheless, Omar bowed to the
342 common finitude of bats and men, brought upon by higher forces (whether God or
343 eagle), which do not treat bats as valuable “disease sentinels.” Through reflecting on the
344 death of singular bats, he may have taken the perspective of singular bats instead of
345 subsuming them to their species and his discourse did not essentialize humans’
346 superiority over bats. But their superiority is used to absolve samplers from their
347 responsibility toward individual animals (see Weisberg, 2009).

348
349 Scholarship on human-animal relationships in biosecurity and lab contexts celebrates
350 the moral ambivalence of interspecies encounters: If killing must happen, it entails
351 deliberations and care. However, for samplers embedded in a rural economy where bats
352 act as a nuisance and a resource, killing them is caring for humans. Even when, outside
353 the purview of lab ethics, samplers may be affected by bats’ frailty, they naturalize their
354 mortality as killability. The figure of the “bat who may be harmed” is inherently
355 ambiguous: Their vulnerability to the sampling lab warrants protection from the humans
356 who subject them to their tools, if for a short time, while it also legitimizes the harm
357 inflicted upon them by humans and nonhumans.

358

359 **Postcolonial Perspectives**

360

361 If we look past the apparent ease with which samplers “tinker” with bioethical protocols,
362 certain situations do expose them to intractable conflicts between the logics of care and

363 those of biosecurity. Such tensions conjure up the haunting presence of power relations
364 of a postcolonial nature. Indeed, in Guinea, they are not experienced as intersecting
365 various forms of inequalities, but rather as enacting the legacy of colonialism and of a
366 world order saturated by imperialist relations superimposed over racial hierarchies. This
367 postcolonial condition reasserts relations and hierarchies between samplers and bats.
368 Because of them, samplers are not only caught between the two bat figures, but also
369 threatened by their entanglement in their work.

370

371 The double bind exposes them to even more excruciating dilemmas when it concerns
372 animals who excite deeper moral feelings, such as lactating and pregnant bats with their
373 pups, who are usually spared the dark humor and treated with compassion. When
374 finding out that he had to sample a lactating bat, sampling agent Cissé, a vet working in
375 the state administration, urged everyone to proceed quickly so as to limit the separation
376 between mother and pup. But a dreadful shriek pierced the air. The bat had bitten Cissé,
377 who shook his hand to have her let go. The mother soon took off, leaving her pup
378 behind, and a dispute arose around responsibilities for the accident and the sad fate
379 promised to the bat pup, accompanied by comments on motherly neglect. But Cissé,
380 who went to disinfect his hand, plainly said: "My health comes first. I don't have any
381 insurance if I get sick." Cissé likely spoke out because he worked with French vet
382 students, whom he assumed would be evacuated for treatment if dangerously ill, as
383 happened during the 2013–2016 Ebola outbreak. Although the Guinean agents had
384 been vaccinated against rabies, and their work contract mentioned an insurance
385 covering 80% of their health costs, they paid their health bills out of their own pockets.

386 They rarely openly considered the risk of an Ebola infection, but tiring nighttime labor
387 increased their chances of making biosecurity mistakes, and the nine-day-long missions,
388 in poor housing conditions, exposed them to snake bites and other parasitic diseases.

389
390 Instances when fieldworkers are bitten, i.e., “bioaccidents,” are not rare. They trigger an
391 anxious search for a tear in the glove, and a long wait for symptoms of contamination to
392 potentially occur. Equally apprehended is the reaction of superiors, who must be notified
393 and could very well terminate the contract of blunderers. In these encounters, the bat
394 has sharp teeth before she has milk and a pup. The “bat who harms” obliterates the “bat
395 who is harmed.” This process is facilitated by the ambiguous figure of the “bat who is
396 harmed,” whose gendered vulnerability justifies protection as well as destruction. Other
397 agents, agreeing with Cissé and hoping that I would act as a go-between, told me, “We
398 are told to treat bats humanely, but us too! It is good to save other species, but when
399 your own species is endangered . . .,” hinting at a fraught competition between
400 nonhuman and certain human animals for survival, skewed by the conservation priorities
401 of former imperial powers. Consequently, agents opted not to give fruit juice to bats in
402 spite of the bioethics protocol’s recommendation, as they were not offered beverages
403 themselves, despite the biosecurity protocol’s recommendation against dehydration.
404 They perceived that they – not their local, and even less their foreign managers, based
405 in the US or France – bore the costs of the One Health dual concern for “bats who harm”
406 and “bats who are harmed.” Thereby, the potential for blurring boundaries between
407 species through care, claimed by certain lab studies, yields to another power frontier, of
408 a postcolonial (and gendered) nature.

409

410 **Conclusion**

411

412 The 2013–2016 Ebola outbreak prompted more research into the emerging zoonoses
413 carried by bats and a call for their conservation, given their beneficial role for
414 environmental and human health as they disperse seeds, pollinate, and control insect
415 populations. One Health is a vision mediated by technologies such as the sampling
416 laboratory, on which the possibility of humans encountering elusive bat worlds depends
417 (Fairhead, 2018). This article aimed to expand the list of One Health technologies to
418 protective equipment and the professional skills enabling safe investigations on bats.

419

420 This article conceptualizes wildlife sampling as a productive process which may
421 transform perspectives despite power differentials. The bat, both “harmed” and
422 “harming,” enacts limited caring and biosecurity practices in the One Health laboratory.
423 Frictions between the two perspectives are handled with expertise and the lab provides
424 a space of exception in which to reflect on hierarchies between species. But the animal’s
425 negative charisma makes one perspective prevail – the “bat who is harmed” – especially
426 as “the bat who harms” seems to threaten the lives of postcolonial workers.

427

428 Despite the claimed universality of threats to interspecies health – industrial farming,
429 microbial resistances, etc. – the ability to recognize and respond to risk events is
430 unequally distributed, all the more as risks themselves are differentially spread

431 (Craddock & Hinchliffe, 2015). This piece builds upon that critique to show that One
432 Health itself legitimizes entanglements which do not make for concomitant multispecies
433 thriving. One Health produces pathogenic entanglements at the same time as it places
434 the responsibility to care for disease sentinels on certain human beings. These workers
435 are not the universal-minded, caring, and careful humans postulated by One Health
436 (Hinchliffe, 2015), but vulnerable bodies inscribed in settings where they have low
437 access to healthcare and little or no social protection. At stake are the effects of the
438 intersection between postcolonial inequalities and gendered and anthropocentric
439 hierarchies for workers and the animals they subordinate.

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