RVC OPEN ACCESS REPOSITORY – COPYRIGHT NOTICE

Royal
Veterinary
College
University of London

1   **The Veterinary Identity: A Time and Context Model.**

2

3   **Abstract:** The nature of professionalism teaching is a current issue in veterinary education, with an

4   individual's identity as a professional having implications for their values and behaviours, and for

5   their career satisfaction and psychological wellbeing. An appropriately formed professional identity

6   imparts competence in making complex decisions: those that involve multiple perspectives and are

7   complicated by contextual challenges. It enables an individual to act in a way that aligns with their

8   professional values and priorities, and imparts resilience to situations in which their actions are

9   dissonant to these personal beliefs. There are challenges in professionalism teaching that relate to

10   student engagement and faculty confidence in this area. However, these cannot be addressed

11   without first defining the veterinary professional identity, in effect, the aim of professionalism

12   teaching. In this paper, existing identity models from the wider literature have been analysed

13   through a veterinary lens. This analysis has then been used to construct a model of veterinary

14   professional identity which incorporates the self (personal morals and values), social development

15   (learning from the workplace environment), and professional behaviours. Individuals that form what

16   we have termed "self-environment-behaviour connections" are proposed to be able to use

17   workplace learning opportunities to inform their identity development, such that environmental

18   complexity does not obstruct the link between values and behaviours. Those who fail to connect

19   with the environment in this way may perceive that environmental influences (the client, financial

20   limitations) are obstructive to enacting their desired identity, and they may struggle with decision-

21   making in complex scenarios.

22

24

25

26 **Introduction**

27

28 The teaching of professionalism, and the development of professional identity, are current issues in

29 both medical and veterinary education.[1,2] Placing the concept of professional identity into education

30 makes explicit the responsibility of medical and veterinary educators to support the development of

31 an appropriate identity in their students. In medicine this process of formation has been described

32 as the way in which the values, attitudes and behaviours of the profession are internalised in the

33 progression from student to doctor.[2] In 2012, Mossop broached the question, in this journal, "Is it

34 time to define veterinary professionalism?", and reviewed the literature relating to professionalism

35 in medicine.[1] Since her article, some of the leading authors she cited have advocated a move away

36 from "teaching professionalism" to medical students, towards curriculum support for the process of

37 identity formation.[2] This change in focus incorporates the significance of context and environmental

38 complexity to the individual professional's decisions and actions, prompts the individual to consider

39 not only the way they act, but also their underlying values and motivations, and places a greater

40 emphasis on the diversity of priorities and values that exist within a profession's members.[3]

41 Challenges for veterinary education include determining how teaching designed around professional

42 identity formation will be of benefit to current and future veterinarians. Alongside this, we need to

43 identify our teaching aims: a model of professional identity and its formation that is of most value to

44 our profession.

45

46 Professional identity can be defined as the set of values and priorities that are meaningful to the

47 individual, and which guide and inform their behaviours in their professional role. Although some

48 authors[2] emphasise the common values and attributes (such as altruism and integrity) that are held

49 by members of a profession, others highlight the differences in identity priorities between members

50 of a profession.[4] In Castellani and Hafferty's model, they demonstrate that a successful medical

51 profession incorporates members who differently value and prioritise attributes such as patient

52 altruism, work-life balance, commercialism and social justice (equality in healthcare access).[4] In this

53 framework, an individual will personally determine their own prioritisation of these professional

54 attributes, and their professional identity will depend in part on their pre-held personal and cultural

55 identity values. Their professional identity formation will then represent the process of these values

56 being moulded, adapted and negotiated as the individual enters into the professional environment.

57 The individual may remain strongly adhered to their original set of personal identity values, and how

58 they conceived these as being demonstrated in their professional self. Such individuals must find a

59 way, during professional identity development, to negotiate these into their professional

60   behaviours. Alternatively, and at the other extreme, an individual may eschew their previous beliefs,

61   and build a new set of identity values based on those demonstrated by their professional peers.

62   Others will fall somewhere in between, and use their entry to the professional environment (initially

63   during workplace learning and later as a novice professional) to adapt and develop their previous

64   beliefs, creating a new set of "context-informed" identity values, that represent an adapted version

65   of their pre-professional selves.

66

67   The wider literature contains a huge volume of work devoted to defining identity, situated in both

68   social and personal frameworks.[5-7] Models of medical professional identity development are

69   available.[2] However, in contrast to professionalism, where many of the individual attitudes and

70   behaviours are shared between doctors and veterinarians, the significant differences in focus and

71   structure between the veterinary and medical professions necessitate our own model of

72   professional identity and its development. The majority of veterinary graduates enter general

73   practice immediately after graduation, without entering formal programmes of mentoring or

74   postgraduate education.[8] They must become competent at working independently, with

75   responsibility for their own patients, in the early weeks of work. The change from "identity as

76   student", with little to no responsibility for decision-making, to "identity as professional", with full

77   responsibility for patient care, therefore occurs rapidly, and without a period of sustained, gradual

78   withdrawal of supervision. New veterinary graduates make decisions that have implications for the

79   veterinary business, the emotional state of their clients (and of the clients' families), and the

80   working life of their colleagues, as well as the health and welfare of their patients. They must use

81   discretion in their actions, judging whether to provide textbook versions of "gold-standard"

82   approaches to disease diagnosis and treatment, create adapted versions to fit the individual

83   situation, or simply provide reassurance that no clinical intervention is needed.[9]

84

85   With this in mind, we propose that a model of veterinary professional identity will incorporate

86   environment and context – the veterinary graduate's actions are highly context-dependent and we

87   consider that an identity that ignores context is not appropriate. The acquisition of this identity will

88   be a developmental process, as the student transfers from the "textbook" veterinarian of student-

89   hood, to the autonomous veterinary professional of the work environment. In this paper we will first

90   discuss why the notion of professional identity is an important issue for the novice professional.

91   Existing identity frameworks will then be reviewed to help construct a veterinary-specific identity

92   model.

93

94

The importance of professional identity to the early career professional

96

97   We have previously identified that the way early career veterinarians define their identity influences

98   the sense of wellbeing they experience in their work.[10] Individuals who define their professional

99   priorities on the basis of working alongside the client, colleagues and the business, and are not

100 simply focused on prioritizing patient diagnosis and treatment, seem better placed to draw

101 satisfaction from their role. This is perhaps unsurprising, as particularly in general veterinary

102 practice, there will be relatively few scenarios in which a definitive diagnosis can be made, and for

103 which evidence-supported recommendations for treatment can be implemented.[9] Patients may get

104 better before a diagnosis is reached, client finances may reduce the opportunities for diagnostic

105 tests and treatment options, and limited clinic equipment or expertise may preclude the desired

106 clinical management.[10] If an individual constructs their identity as one who values these contextual

107 challenges, and thrives on the opportunity to create individual solutions to problems presented in

108 the professional environment, they will be more likely to encounter situations that allow them to

109 fulfil their identity priorities. In our research, for those individuals who persistently and exclusively

110 prioritized only a successful diagnosis and treatment, contextual complexity (equipment availability,

111 client wishes, financial limitations) was not seen as a valued component of their role. Instead of

112 representing a challenge to overcome or problem to work through, these contextual elements

113 appeared only as frustrating obstructions to the realization of identity goals. The actions that were

114 prioritized by these individuals, and which represented their desired self-identity, were seen to be

115 blocked by challenges within the veterinary environment.

116

117 The association between identity conceptualisation and mental wellbeing is well known, with a well-

118 documented link between identity and psychological wellbeing.[11,12] Identity dissonance (acting in a

119 way that is discordant with the prioritised values and goals of the individual) was described by Taylor

120 as evoking feelings of anxiety, instability, and a perceived lack of control over one's environment.[13]

121 In contrast, behaving in a way that consistently aligns with one's own beliefs, goals and values is a

122 key foundation of psychological wellbeing.[14] Alignment of one's identity values and external

123 behaviours is facilitated if the individual moves into a social context in which the norms of the group

124 mirror the goals of the individual (self-verification theory).[15] Alternatively, the individual can achieve

125 this if they are able to negotiate their own values into their environment and retain the ability to act

126 "true to self" in a variety of social contexts (self-determination theory).[16] For veterinarians who

127 define their identity according to a limited, narrow set of professional priorities, there will be a limit

128 to the professional environments in which they will experience the wellbeing associated with

129 aligning actions and identity goals. They will require the client population, clinic equipment and

130 expertise, and employment culture all to be enabling to them achieving their professional priorities.

131 They may therefore find themselves restricted to specific practice types, such as referral work,

132 shelter medicine or charity practice. They may also perpetually change practices, to find a work

133 environment in which contextual features are not perceived as obstructive to their prioritised

134 behaviours. For those individuals who define their professional identity more broadly, and for whom

135 contextual features represent part of their identity values (e.g. the ability to work alongside

136 stakeholders to find the best clinical action for the needs of the patient, business and client), they

137 will be more able to act in a way that is aligned with their identity, and will be able to do so in a

138 range of different professional environments. Ryan and Deci's self-determination theory predicts

139 that wellbeing will be supported if an individual can seek out and complete challenges and tasks that

140 are important to them and that are aligned with their own values, and in doing so work with others

141 who share similar values. This suggests that for veterinarians who define their identity more broadly,

142 wellbeing will derive from the satisfaction achieved from problem-solving environmental challenges

143 and being able to create individual solutions in partnership with clients and colleagues.[16]

144

145 An identity built around dualistic notions of the "single right" way to diagnose and treat patients

146 may be seen as a naïve view of the professional role. A difference between this narrow view,

147 emphasising patient treatment, and the broader view, incorporating challenges of the professional

148 environment, has also been described by young doctors as they enter the professional

149 environment.[17] However, a discrepancy between perceptions of the prized veterinary identity (what

150 the individual feels they ought to be), and the actual identity (what they are) is not restricted to the

151 early veterinary career, and contributes to career stress.[18] The veterinary clinic is a complex

152 environment, in which the needs of wider stakeholders frequently conflict with professional goals

153 aimed at resolution of disease.[19] Whether this environmental complexity is embraced, and

154 internalized into the veterinary identity, or is seen as a persistent barrier to it, will contribute to

155 whether an individual perceives a sense of achievement and satisfaction with their career. Improved

156 understanding of professional identity and the determinants of its development are therefore

157 important to the discourse surrounding veterinary career satisfaction and psychological wellbeing. A

158 conceptual framework of the veterinary identity that is appropriate to success in veterinary practice

159 may offer benefits in preventing dissonance between the idealized and actualized professional

160 identity, if students are supported in the development of such an identity. Helping students in this

161 way offers the potential to enhance their resilience to the stresses of the veterinary professional

162 environment. Curricular interventions that scaffold this professional identity formation are described

163 elsewhere.[3]

164

165

166 **Review of identity frameworks**

167

168 We will now review existing frameworks for defining identity and describing its formation. These will

169 then be integrated in the construction of a veterinary-specific model.

170

171 **1. Marcia's Identity Statuses.**

172

173 Marcia's identity status model helps us to understand several important concepts in the formation

174 of an identity, and how the way that an identity is developed influences emotional well-being and

175 satisfaction with one's actions. Within the wider identity literature, conceptions of professional

176 identity formation integrate personal and social identity frameworks.[5,6,13,20] Personal morality and

177 values ("the self", or personal identity) underpin a socially constructed and validated set of actions

178 and behaviours that are expressed by the individual in their professional context. Social influences

179 can be enabling to the exteriorisation of inner values in visible actions and behaviours:[21] joining a

180 like-minded group, whose members share common values, leads to an empowering sense of "fitting

181 in", increasing self-esteem and encouraging expression of behaviours supported by the group.[22]

182 Social construction of learning is supported, facilitating members' self-actualization.[23] Alternatively,

183 it may be inhibitory, suppressing the demonstration of an individual's identity values if this would

184 lead to conflict. An emphasis on *sense* of identity (self-awareness of one's values and moral position)

185 is also important: this awareness imparts a moral compass, such that when faced with a dilemma,

186 the individual senses whether a chosen action is aligned with their values, or is dissonant to them.[13]

187 Self-identity awareness and the different ways an individual can develop their identity as a result of

188 their social interactions are central to Marcia's identity conceptualisation.[24]

189

190 In this model, the "achieved" identity status is considered to represent the most well-developed

191 form of identity construction. Such an individual possesses a strong self-awareness of their own

192 priorities and values, and has informed this identity through a process of engaging with different

193 options. This process, known as identity exploration, allows the individual to make decisions about

194 their identity that are informed by identifying alternatives in their social environment. Through this

195 process, the individual also gains insight to their own self-identity values, by reflecting on self,

196   making comparisons with "*other*" (individuals possessing alternate identity values and priorities),

197   and adapting as a result of this experience. The achieved identity status represents an identity

198   selection that is informed by an appreciation and valuing of *other*. As a result, individuals possessing

199   alternative views and priorities can be encountered reflectively and non-defensively. For the

200   veterinarian, clients or colleagues possessing differing priorities can therefore be understood non-

201   judgmentally, allowing a reasoned decision to be made in the face of conflicting needs. This well-

202   developed sense of identity also imparts an ability to self-analyse, and understand one's own

203   behaviours in the context of self-values and moral beliefs, and those of others within a particular

204   situation. This ability to rationalise one's own actions contributes to the documented lower anxiety

205   levels demonstrated in such individuals.[25] Behaviours are understood as either aligning with self, or

206   in some circumstances, through necessity, aligning with *other*. Discordant behaviours are therefore

207   understood not as a representation of self, but as a transient necessary action, for example to

208   empathise with a client or colleague possessing different identity values. A further benefit to the

209   achieved identity status arises from the well-developed understanding of self. A strong sense of

210   one's own values and priorities provides guidance and confidence in decision-making and taking

211   actions, particularly in the face of uncertainty. For the novice veterinarian, this imparts a higher level

212   of competence in reasoning and decision-making in relation to the complex scenarios of the

213   veterinary professional.[19]

214

215   Marcia's diffused and foreclosed identity statuses represent naïve and under-developed identies.[25]

216   The "foreclosed" identity status is one that has arisen in the absence of social exploration, and the

217   individual remains resistant to being informed by alternative identities. Such individuals have a

218   strong sense of self; for the novice veterinarian they will have a good understanding of their own

219   professional priorities so are typically able to decide what course of action they wish to take in a

220   clinical situation. However they have an under-developed appreciation of *other*, and struggle to

221   value different ways of doing. They can therefore become defensive or judgmental when they are

222   challenged by those with alternative priorities or approaches to practice. They are also at risk from a

223   lack of sense of belonging if their views and actions are different from those of their peers, and they

224   may feel isolated and unable to "fit in". The "diffused" identity status also results from a lack of

225   identity exploration, but contrasts with "foreclosed" individuals because they lack a sense of their

226   own identity. Without an understanding of their own priorities, they struggle to identify a desired

227   action and, when faced with a complex dilemma, they must seek the opinions of a peer or authority

228   figure. For graduating veterinarians, such individuals may therefore show an increased dependence

229   on close mentoring and the availability of authority figures to support their decisions. If left alone,

230   they may struggle to take actions with their cases, and delay challenging decisions until assistance

231   from senior colleagues becomes available. In further contrast to those with a foreclosed identity

232   status, the lack of strong self-identity values means such individuals tend to be very happy and at

233   ease with their actions, very easily move into a group, and "fit in" with peers. They therefore tend to

234   demonstrate emotional well-being, as long as they are not challenged regarding their actions, and

235   are not left unsupported to resolve complex veterinary scenarios (such as a client with limited

236   finances asking for an amended treatment plan).

237

238   The last of Marcia's identity statuses is described as an individual being in a state of "moratorium".

239   They are actively undergoing identity exploration, and have a deep understanding of differences in

240   identity priorities and values. Whereas those with a "foreclosed" or "diffused" identity status may

241   represent Perry's dualistic approach to knowledge[26] (there is a "right" approach, determined either

242   by the individual's values, or those of their group), those in a moratorium state possess a multiplicity

243   understanding of identity. They are acutely aware of many alternatives, have an appreciation of

244   complexity, and are willing to see a dilemma from multiple different perspectives. However, they

245   lack a strong sense of self, and therefore struggle to make the commitment to an identity (and to a

246   decision in a complex situation). This identity status is of concern within the veterinary profession,

247   because their deeply reflective understanding of complexity and alternative viewpoints manifests in

248   high levels of anxiety, resulting from an inability to commit to a valued sense of self.[23,24] Such

249   veterinarians may demonstrate perpetual anxiety surrounding their actions, perceiving them to be

250   inferior to those of an assumed *other*, an apparently superior identity.

251

252   Marcia's model therefore helps to demonstrate the importance of an informed and clear self-

253   identity, which results from engaging with the different sets of identity priorities and values present

254   in the work environment. This process of engaging with identity in the social context will now be

255   explored further through the work of Billett[27] and Korthagen[28].

256

257   **2. The importance of context to identity development: The work of Billett and Korthagen.**

258

259   Like Marcia, Billett conceptualises identity formation through social engagement, and more

260   specifically, the construction of professional identity through engaging in professional work.[27] The

261   process described is complex, and it is not surprising that as the veterinary student experiences

262   workplace learning opportunities, they may simply learn the technical competences of professional

263   work.[29] Billett identified that entering the work environment can result in a re-shaping of the sense

264   of self. However he emphasises that this requires active engagement and individual agency in the

265   utilisation of this experience to inform the developing identity. The individual must have "*intentions,*

266   *gaze and engagement".*[30] This identification and exploration of identities in the workplace, and

267   engagement in reshaping self, requires interaction with the social elements of the workplace:

268   professional and local norms, and the complex interactions of professionals, paraprofessionals and

269   clients with different identity values. The actions, observations and methods of engaging in this

270   process are undefined, but we have conceived this individual intention to observe and reflect on

271   different identities, and to consider the differences between self and *other*, as the formation of a

272   self-environment connection. By "connecting" their self-values with the work environment,

273   individuals can begin to reflect on how to negotiate their self-priorities into the profession. The

274   developing identity becomes informed by the different identity values demonstrated by

275   professionals, as well as by the client and wider team.

276

277   In the previous section, we have described the significance of alignment of self and behaviours, and

278   shown that for the wellbeing of the developing professional, it is important for behaviours to reflect

279   self, within the work environment. Building on the idea of a self-environment connection,

280   Korthagen's "Onion" model of identity helps conceptualise the formation of connections between

281   self and behaviours.[28] In this model, an individual's "inner core" (their values) is expressed in their

282   "outer layer" as actions and behaviours, the whole individual then sitting in the external

283   environment. Korthagen described identity as something that "*anchors the self to social systems*"[31] ,

284   i.e. it connects core values to externally observable actions in the social context. Identity formation

285   is proposed to involve the formation of this connection between inner values and observable

286   actions, allowing the individual to act in a way that remains true to self. The connection is 2-way,

287   and therefore when formed, allows an individual's activities (workplace learning behaviours) to

288   inform their core values. In our context, engaging with the workplace environment to form a self-

289   environment-behaviours connection includes learning to learn from the diverse "content" present in

290   the veterinary clinic. This includes identifying the environmental features that challenge the

291   connection of behaviours to self.

292

293   The strengths of this model are that as identity is formed in context, the process incorporates a way

294   of connecting self-values to behaviours. Korthagen conceptualised the informing of self from the

295   environment as occurring through learning behaviours. It could be argued that this neglects the

296   cognitive and affective elements of self-environment engagement, which are portrayed in Billett's

297   "intentions and gaze" and also in Bourdieu's "habitus". In one of Bourdieu's earliest descriptions of

298 *"habitus",* he writes: *"[by] integrating past experiences, [habitus] functions at every moment as a*
299 *matrix of <u>perceptions, appreciations, and actions</u> and makes possible the achievement of infinitely*
300 *diversified tasks…"* (Bourdieu 1998, quoted in Lizardo 2004,[32] emphases added). An exclusive
301 emphasis on behavioural learning, without affective, reflective and analytical components, also
302 presents a risk that inappropriate environmental behaviours (such as mimicking inappropriate role
303 models) will adversely influence the developing self-identity, resulting in unfavourable identity
304 attributes (e.g. declining empathy). These may be adopted, via the hidden curriculum, from a poor
305 understanding of role modelled behaviour in a challenging environment, or by mimicking
306 "unprofessional" behaviours and attributes that are assumed to be favoured by the profession.[33]
307
308 We therefore propose that there are important cognitive (intention, reflection) and affective
309 (appreciation of *other*) elements to identity exploration in the workplace, and this is not simply a
310 behavioural process. We are also cognisant of the differing understanding of the environment,
311 either as something that is intimately connected to professional self-identity, or as presenting a
312 persistent obstruction to it. On this basis, we have conceptualised identity formation as firstly
313 requiring a self-environment connection to be formed, through environmental engagement. A
314 failure of self to connect to the environment (because identity is formed out of context, or only
315 based on select elements of the environment that align with the naïve self) results in an inability to
316 learn from the environment, an identity that is uninformed by the workplace and an individual for
317 whom environmental complexity obstructs the demonstration of desired behaviours. It is not
318 possible for such an individual to negotiate their self-values into the professional identity, as it is
319 demonstrated through their workplace behaviours. In a context-informed identity, the environment
320 becomes part of the self-identity conceptualisation. Individuals with this self-environment identity
321 construct can more easily negotiate their sense of identity into the work environment, and
322 demonstrate behaviours that are aligned with self-values. Self-environment-behaviour connections
323 are therefore achieved. Individuals are not consumed by the environment, and maintain a sense of
324 self, such that dissonant actions and alternate opinions can be understood.
325
326
327 **3. The time-dependence of professional identity formation: Nystrom's model and Perry's**
328 **framework**
329
330 The process of environmental engagement and informing identity will take time and represent a
331 developmental process. It does not necessarily follow a smooth path: Erikson's

332 identity "crises" describe the sense of turmoil experienced as a previous identity is abandoned in the

333 search for a more mature one (most notably in the transition from adolescence to an adult

334 identity).[34] Veterinary students who engage with identity formation in the workplace may

335 experience this sense of "identity crisis" as they encounter challenges to their pre-conceived views

336 of the veterinary identity, struggle to rationalise the complexity of alternate identity priorities, or

337 observe that their preferred identity is not apparent in this context. The experiences of medical

338 students demonstrate how they can become troubled when their priorities for being a "good

339 doctor" are obscured in their role models by wider contextual challenges.[35] Identity development in

340 the workplace therefore requires support and guidance for students as they engage in this process.

341 We will now use Perry's framework of intellectual maturity and Nystrom's model of professional

342 identity formation to demonstrate how identity development requires a progressive increase in the

343 complexity of a student's learning approach. This highlights the time-dependence of an appropriate

344 identity model.

345

346 Identity-environment engagement requires a recognition of the complexity of the professional

347 identity. A level of intellectual maturity is needed to appreciate that professional identity is multiple

348 and not singular, varies according to an individual's priorities, is challenged by context, and may

349 externally adapt according to stakeholder needs. Perry's framework[26] highlights that this

350 appreciation of multiplicity and context-variation of knowledge is achieved only at a developed stage

351 of intellectual maturity. Students are described as instead entering their college education with a

352 more dualistic way of thinking: concepts are represented by single correct answers, with alternatives

353 being incorrect. Kegan's conception of identity development, described by Cruess et al,[2] is built on

354 this framework, and at college entry, students are understood to view identity as a singular concept,

355 in which their own priorities are assumed to be universally represented in others. As students

356 mature through their college education, Perry describes a progression, firstly to appreciating

357 multiple perspectives, from which individuals can eventually define their own, context-dependent

358 solutions (a "relativistic" understanding of knowledge). In terms of identity, this incorporates a

359 recognition of the validity of alternate sets of priorities within the profession, and that context may

360 influence the expression of these priorities and values with an individual professional. Perry's model

361 emphasises the developmental nature of this maturity, and that it is unrealistic to expect complex

362 and relativistic thinking at college-entry; identity development will therefore be gradual, and

363 fostered over the course of the students' university experiences. The recognition of complexity in

364 professional identity requires an appreciation of complexity in the clinic environment: if the clinic is

365 understood by simple "gold standard" vs "inferior" sets of clinical actions, that are independent of

366 context, then it is unlikely the student will grasp the importance of complexity in their professional

367 identity.

368

369 Nystrom's model provides an additional lens for viewing the way novice professionals develop their

370 engagement with their environment.[36] For the development of a professional identity, Nystrom

371 starts with an immature identity, formed through the simple act of "fitting in": modelling one's

372 behaviours on those of one's peers. In this naive stage, identity can be understood as representing a

373 behaviourist approach to learning: the individual mirrors their actions on those of their social group.

374 There is no sense of self, and therefore no appreciation of a connection (or disconnect) between self

375 and behaviours, or a sense of self compared to others in the environment. With appropriate

376 reflection on the activities observed in the workplace and on the individual's own actions, Nystrom

377 describes the achievement of an "integrated" identity: one in which the individual can understand

378 their own and others' actions in the context of their own values.[36] Identity understanding therefore

379 becomes more cognitive and analytical, as reflection on the workplace enables the individual to

380 develop an understanding of self-priorities. From this point, they need to determine how to

381 negotiate the integration of these into different contexts: different workplace environments, as well

382 as out-of-work spaces. Reflection and analysis of peers and role models in the workplace, their

383 actions and their professional priorities, helps support the developing professional in determining

384 how to negotiate their entry, and exteriorise their own sense of self in their behaviours. The peer

385 group can be enabling to this process, as the shared experience of environmental complexity can

386 lead to social construction of a collaboratively formed identity. For the individual novice

387 professional, this socially-constructed understanding also comes from interactions with clients and

388 the wider professional team, particularly through the construction of ways to interact with *other*.

389 The resulting socially constructed identity facilitates the successful negotiation of entry to the new

390 community, while retaining important self-beliefs, a concept important to Wenger's negotiated

391 entry to a community of practice.[23]

392

393 Both Perry and Nystrom expose intermediate positions of vulnerability. Perry describes a transition

394 through multiplicity: as dualistic thinking is abandoned, individuals accept the existence of a range of

395 views. All are of equal value, and therefore the individual struggles to make a decision. As they

396 progress further they embrace relativism, when they recognise and commit to context-dependent

397 solutions from the diversity of possible options.[26] For Nystrom, immersion in the workplace is

398 initially associated with compartmentalisation, where professional life is emphasised at the expense

399 of self, and personal life becomes squeezed. Losing touch with the home and university social

400   environments may lead to a lack of social support for the individual's preferred sense of identity,

401   they struggle to demonstrate their own values in their actions and behaviours, and constantly

402   experience a need to act in a way that conflicts with their goals.[36]

403

404   **Our model: a time and context model of developing professional identity.**

405

406   Our model of identity development, from entry into veterinary education to the early career, is

407   shown in Figure 1. There are three stages depicted. First is a stage of "naïve self", which is prior to

408   any engagement with the profession, and represents students entering their education. Any relevant

409   prior experience would be inadequate to fully explore professional identity, as it would be from the

410   stance of one outside the profession. Both Marcia's "foreclosed" and "diffused" identity statuses

411   have been described as naïve identity constructs, due to the lack of exploration that has occurred in

412   their development. Students may therefore have some idea of the type of veterinarian they wish to

413   become, however the lack of prior full engagement with the profession means this cannot be

414   constructed on the basis of identity exploration and understanding of alternatives. Alternatively,

415   they may have little understanding of the importance of priorities and values to the veterinary

416   professional.

417

418   The next stage represents exposure to the work environment, during student workplace learning

419   and early career exposure. For some students this will be complete at the end of their formal

420   education, and identity will remain unchanged as they enter the profession. For others this stage will

421   extend into the early career, as graduates make use of early career experiences to continue to

422   inform their identity development. It is at this stage that the pathways of identity development

423   diverge, and the direction taken depends on the individual's engagement with their environment.

424   The final stage, representing veterinary work, depicts how behaviours are aligned with self-identity

425   values. It is at this stage that the individual gains full responsibility for their actions and behaviours,

426   as they can now implement their clinical and professional decisions. It is most clear to the new

427   professionals at this stage whether they are able to demonstrate the professional behaviours that

428   are important to them. This stage will therefore have important implications for wellbeing, based on

429   the individual's understanding of the connection between their self-identity and their actions.

430

431   In the model, the "negotiated" identity relies on the formation of self-environment connections

432   during the stage of early workplace exposure. As the naïve individual enters the workplace, their

433   engagement is as conceived by Billett,[30] Bourdieu,[32] Nystrom[36] and Wenger.[23] Connection to the

434 environment (represented by overlapping shapes in the model) occurs through internal cognitive

435 processes and affective factors, and external behavioural patterns. These include reflective analysis

436 of the implications of identity differences, the appreciation of diverse work environments, multiple

437 perspectives and different behaviours, and social collaboration to assist and validate the

438 construction of a newly- adapted identity conceptualisation. This has many parallels with Bandura's

439 agentic perspective on socio-cognitive development, which explains development in terms of

440 *"triadic reciprocal causation,"* with self, behaviour and environment all operating as *"interacting*

441 *determinants that influence one another bidirectionally"* (p 14-15).[37] It also overcomes the

442 limitations of the behaviourist emphasis of Korthagen's onion model. The formation of a connection

443 between the self (what is valued) and the environment (what is valued in the environment) helps

444 the novice professional to develop their self-awareness and self-understanding, as represented by

445 Marcia's achieved identity status.[24] They are not completely absorbed by the norms and values of

446 the profession, and the retention of an understanding of self that is distinct from the environment

447 (the non-overlap between self and workplace) provides the individual with a reference point to their

448 individual personal and professional values. It is this understanding of self as distinct from context

449 that helps them understand differences between self and *other*, and also to negotiate entry to a

450 variety of different workplace cultures.

451

452 This process of early environmental engagement contrasts with the pathway that leads to a fixed

453 identity. On entering the work environment, there is an absence of cognitive, affective and

454 behavioural engagement. The individual sees value only in those elements of the environment that

455 reflect their own identity ideals; in all other aspects the failure to value and empathise with

456 alternate perspectives prevents the formation of a self-environment connection. The self and

457 environment therefore are depicted as largely non-overlapping. Engagement will only occur with the

458 "perceived" environment: those aspects that fit with the individual's identity ideals. The identity

459 therefore remains uninformed by environmental complexity, and similarly to Marcia's foreclosed

460 identity status, is not a product of identity exploration.[24] The students described by Matthew et al,[29]

461 who selectively focus on practical skills and the "right" way to treat each disease, may represent

462 these individuals, who become blinkered and selective in their workplace learning, and choose only

463 to inform themselves of the values and actions that conform with their identity priorities.

464

465 For those who develop a behaviourist identity, entry to the work environment resembles Tajfel's

466 "group identity" model.[6] There is a lack of understanding of the concept of the self (similarly to

467 Marcia's diffused identity status),[24] and the individual is absorbed by the norms and actions of the

468   group. They transfer from a naïve self, with no understanding of their own values, to a behaviourist

469   self: there is still no understanding of values, and they merely mimic the behaviours of their peers,

470   demonstrating opinions and behaviours that meet with rewards (clients' gratitude, assessors' high

471   marks, encouragement from employers). Their identity is based on behaviourist learning, and there

472   is minimal analysis of the underlying reasons for the behaviours shown and actions taken.

473

474   In the final stage (early career), we see the consequences of earlier environmental connection for

475   identity-behaviour alignment. For the "negotiated" identity, the process of engaging with the

476   environment has imparted the characteristics of the achieved identity status: the ability to

477   encounter conflicting views reflectively and non-defensively.[24] Their identity values are constructed

478   on the basis of understanding the challenges of context and, as described by Ryan and Deci,[16] their

479   wellbeing and sense of achievement come from overcoming contextual challenges in order to be

480   able to act in accordance with their own values. Because of their broader notion of identity, which

481   incorporates the challenges of the veterinary environment and working alongside *other*, behaviours

482   tend to reflect these identity goals. They have therefore successfully negotiated a context-informed,

483   adapted sense of their own identity into the work environment. As shown in the model, behaviours

484   mostly overlap with self. However it is a feature of veterinary practice that, on occasion, the

485   veterinarian must act in a way that is discordant with self-priorities, such as to empathise with *other*

486   and provide support in an action that conflicts with self-beliefs. This is depicted in the model as

487   behaviours that do not overlap with the self. Because this individual has a high level of self-

488   awareness and understanding, an appreciation of *other*, and can value (if not internalise) the needs

489   of other stakeholders, they understand that such actions do not reflect their own motivations and

490   values. They therefore can be rationalised, and far from leading to the individual judging themselves

491   poorly, are seen as successful in relation to contextual needs.

492

493   This contrasts with the pathway to the fixed identity. The lack of engagement with alternative

494   perspectives within the work environment leads to strong boundaries between the sense of self, and

495   the values and behaviours demonstrated by others in the workplace. Because of the lack of

496   connection between self and environment, the individual struggles to negotiate the entry of their

497   own values into the workplace, and, with the exception of rare situations in which context is aligned

498   with self-values, they are unable to demonstrate behaviours that are aligned with self. The needs of

499   others in the environment (clients, the resources available in the practice, practice norms)

500   perpetually obstruct the connection between self-goals and aligned identity behaviours. Context

501   therefore dictates the individual's actions (behaviours overlap with environment), but these are in

502 complete dissonance with self, meaning that the individual has no pride in their actions, and they

503 impart no sense of achievement. To feel successful, the individual will need to do as described by

504 Swann and Read[15] and identify an environment that better fits their identity priorities. In such an

505 environment, their identity depiction will look more like that of the "negotiated" identity, as

506 behaviours will overlap with self. They will continue to struggle if contextual challenges threaten

507 their actions, but they will have the support of like-minded peers.

508

509 For the behaviourist identity pathway, the individual has no trouble mimicking the behaviours of the

510 group. They lack self-awareness, but model their conceptualisation of a good veterinarian on the

511 values and behaviours modelled by their peers. As with Marcia's diffused identity status, they can

512 thrive in a group setting, as they tend to be popular and fit in well. Without self-understanding and

513 individual agency they have no reason to behave in a way that invites conflict. In an environment

514 that does not invite challenge (for example one in which policy-led medicine is strong, and there is

515 little professional autonomy) they may thrive and be rewarded for their work. However, they will

516 struggle when faced with a complex decision, and will have limited ability to reflect on their own

517 learning and development.

518

519 The time element of our model arises from the period of development needed for students and

520 novice professionals to engage in complexity, develop powers of analysis, and be able to construct

521 complex thinking by interacting with peers and with *other*. Perry noted that this stage of intellectual

522 development is not necessarily reached by the end of college education, and therefore veterinary

523 graduates may take variable periods of time to be able to engage in their work environments to

524 inform their identity.[26] Our model suggests that arrested development (persistence of a fixed or

525 behaviourist identity) occurs without meaningful and agentic environmental engagement. However

526 it is possible that for affected individuals, they will form self-environment connections at a later

527 career stage, perhaps reflecting a more delayed development to relativistic thinking. Their

528 development of an informed identity, their appreciation of complexity and valuing their autonomy

529 (providing different solutions in different contexts), may all develop later. It may need later-career

530 scaffolding in terms of mentoring or continuing professional development that encourages reflection

531 on self.

532

533

534 **Conclusions and future needs**

535

536 There is always a danger of using a linear, discrete model to describe something as complex and

537 messy as identity formation. In reality, the "fixed," "behavioural" and "negotiated" notions of

538 professional identity may represent extremes, with students and graduates experiencing some

539 situations in which aspects of their identity are well-defined, while in different situations they rely

540 more on mimicking others. Although we have focused on the transition from student to novice

541 professional as the most rapid period of identity change, the ongoing development of the negotiated

542 professional identity, and the reshaping of self as the individual enters different environments, will

543 likely continue throughout the veterinary career. It is perhaps the ability to continue to self-adapt,

544 and experience the troubling re-thinking of self that best characterises the lifelong professional

545 learner.

546

547 Our model is constructed principally on the recognition of key elements for the developing

548 veterinarian that exist within empirical identity models. Our early research has informed the model

549 construction, particularly emphasising the need to incorporate complex decision-making[19] and the

550 potential obstructive influence of the environment.[10] However further identity research, across

551 different stages of a veterinarian's career, is needed to validate the model and inform its ongoing

552 development. This model of professional identity has contributed to curriculum design in our

553 institution.[3] Other authors have highlighted the lack of clear evidence supporting the benefits of

554 veterinary professionalism teaching.[38] It will be interesting to evaluate whether a curriculum model

555 that is focused on identity formation through individual agency, environmental engagement and

556 reflection better supports student development, increases competence at engaging with complexity

557 and improves resilience to discordant behaviours. May and Kinnison[18] have previously identified that

558 encouraging veterinarians to think differently about their professional role supports an

559 improvement in career stress. The potential for a positive impact of this model on veterinary mental

560 health is therefore an important issue to explore.

561

562

563 What purposes does our model serve? In constructing the elements of the competent, confident and

564 resilient veterinarian, this has highlighted the importance of scaffolding to encourage engagement

565 with the professional environment, and support for periods of possible identity "crisis". Key

566 components of veterinary curricula will include provision of exposure to multiple professional

567 identities, and strategies to encourage students to engage in these in the professional workplace.

568 Particularly important will be efforts to facilitate students' recognition of broader notions of identity

569 and career success, and reflect on how these compare to their own self-identity conceptions for

570 their future professional selves. It is vital to emphasise an identity which moves beyond patient

571 healing, to a more holistic identity defined by managing environmental challenges, and integrating

572 the patient, client, family, business, colleagues and hospital in decision frameworks. We have

573 previously recognised that well-meaning workplace teaching strategies, aimed at optimising the

574 students' experiences with complete clinical case material, absence of client complexity and a

575 definitive diagnosis, may inadvertently narrow professional identity conceptions into a model of

576 diagnosis and treatment.[39] Role modelling the complexity of the clinician identity, discussing

577 fallibility, and demonstrating wider notions of success, will all be valuable in validating the students'

578 newly formed professional identities. This will give them the courage to identify with new identity

579 ideals and allow them to graduate from clinical programmes with the tools to develop with the

580 evolution of their individual career trajectories.

581

582

References

1. Mossop, E. (2012). Is it time to define veterinary professionalism? *Journal of Veterinary Medical Education,* 39(1), 93-100.

2. Cruess, R., Cruess, S., Boudreau, J., Snell, L. and Steinert, Y. (2014). Reframing Medical Education to Support Professional Identity Formation. *Academic Medicine*, 89(11), pp.1446-1451.

3. Armitage-Chan, E and May, SA. Developing a professional studies curriculum to support veterinary professional identity formation. *In press,* Journal of Veterinary Medical Education.

4. Castellani, B., & Hafferty, F. W. (2006). The complexities of medical professionalism. In *Professionalism in Medicine* (pp. 3-23). Springer US.

5. Erikson, E. H. (1959). Identity and the life cycle: Selected papers. *Psychological issues*.

6. Tajfel, H. (1982). *Social identity and intergroup relations*. Cambridge University Press.

7. Stryker, S., & Burke, P. J. (2000). The past, present, and future of an identity theory. *Social psychology quarterly*, 284-297.

8. RCVS Survey of Recent Graduates, 2013. Available at: http://www.rcvs.org.uk/publications/rcvs-survey-of-recent-graduates-ies-2013, accessed 13/5/17.

9. May, SA. (2015). Towards a scholarship of primary health care. *Veterinary Record*, *176*(26), 677-681.

10. Armitage-Chan, E., & May, S. A. Identity, environment and mental wellbeing. *Submitted to Veterinary Record*

11. Thoits, P. (2012). Self, Identity, Stress, and Mental Health. *Handbooks of Sociology and Social Research*, pp.357-377.

12. Wald, H., Anthony, D., Hutchinson, T., Liben, S., Smilovitch, M. and Donato, A. (2015). Professional Identity Formation in Medical Education for Humanistic, Resilient Physicians. *Academic Medicine*, 90(6), pp.753-760.

13. Taylor, C. (1989). *Sources of the self*. Cambridge, Mass.: Harvard University Press.

14. Suh, E. M. (2002). Culture, identity consistency, and subjective well-being. *Journal of personality and social psychology*, *83*(6), 1378.

15. Swann, W. B., & Read, S. J. (1981). Self-verification processes: How we sustain our self-conceptions. *Journal of Experimental Social Psychology*, *17*(4), 351-372.

16. Ryan, R. and Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), pp.68-78.

619   17. Pratt, M., Rockmann, K. and Kaufmann, J. (2006). Constructing professional identity: The role
620   of work and identity learning cycles in the customization of identity among medical
621   residents. *Academy of Management Journal*, 49(2), pp.235-262.

622   18. May, S. A., & Kinnison, T. (2015). Continuing professional development: learning that leads
623   to change in individual and collective clinical practice. *Veterinary Record*, *177*(1), 13-13.

624   19. Armitage-Chan, E., Maddison, J. and May, S. (2016). What is the veterinary professional
625   identity? Preliminary findings from web-based continuing professional development in
626   veterinary professionalism. *Veterinary Record*, 178(13), pp.318-318.

627   20. Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers'
628   professional identity. *Teaching and teacher education*, *20*(2), 107-128.

629   21. Ajzen, I. and Fishbein, M. (2005). The influence of attitudes on behaviour. In: D. Albarracin,
630   B. Johnson and M. Zanna, ed., *The handbook of attitudes*, 1st ed. New York: Psychology
631   Press.

632   22. Hogg, M., Terry, D. and White, K. (1995). A Tale of Two Theories: A Critical Comparison of
633   Identity Theory with Social Identity Theory. *Social Psychology Quarterly*, 58(4), p.255.

634   23. Wenger, E. (1998). Communities of practice: Learning as a social system. *Systems
635   thinker*, *9*(5), 2-3.
636

637   24. Kroger, J. and Marcia, J. (2011). The Identity Statuses: Origins, Meanings, and
638   Interpretations. *Handbook of Identity Theory and Research*, pp.31-53.

639   25. Cramer, P. (2017). Identity change between late adolescence and adulthood. *Personality and
640   Individual Differences*, *104*, 538-543.

641   26. Perry, W. (1968). Patterns of Development in Thought and Values of Students in a Liberal
642   Arts College: A Validation of a Scheme. Final Report. [online] Available at:
643   http://eric.ed.gov/?id=ED024315 [Accessed 8 Sep. 2016].

644   27. Billett, S. and Somerville, M. (2004). Transformations at work: identity and learning. *Studies
645   in Continuing Education*, 26(2), pp.309-326.

646   28. Korthagen, F. (2004). In search of the essence of a good teacher: towards a more holistic
647   approach in teacher education. *Teaching and Teacher Education*, 20(1), pp.77-97.

648   29. Matthew, S., Taylor, R. and Ellis, R. (2012). Relationships between students' experiences of
649   learning in an undergraduate internship programme and new graduates' experiences of
650   professional practice. *High Educ*, 64(4), pp.529-542.

651   30. Billett, S (2007) Exercising self through working life: Learning, work and identity. In: A
652   Brown, S Kirpal & F. Raumer (Eds) Identities at work. Springer, Dordecht, The Netherlands. P
653   184.

654   31. Gecas, V. (1985). Self-concept. In: A. Kuper and J. Kuper, ed., *The Social Science*
655   *Encylopaedia*, 1st ed. London: Routledge, pp.739.

656   32. Lizardo, O. (2004). The cognitive origins of Bourdieu's habitus. *Journal for the Theory of*
657   *Social Behaviour*, *34*(4), 375-401.

658   33. Leo, T. and Eagen, K. (2008). Professionalism Education: The Medical Student
659   Response. *Perspectives in Biology and Medicine*, 51(4), pp.508-516.

660   34. Côté, J. and Levine, C. (1987). A formulation of Erikson's theory of ego identity formation.
661   *Developmental Review*, 7(4), pp.273-325.

662   35. Martimianakis, M., Maniate, J. and Hodges, B. (2009). Sociological interpretations of
663   professionalism. *Medical Education*, 43(9), pp.829-837.Nyström, S. (2008). The Dynamics of
664   Professional Identity Formation: Graduates' Transitions from Higher Education to Working
665   Life. *Vocations and Learning*, 2(1), pp.1-18.

666   36. Nyström, S. (2008). The Dynamics of Professional Identity Formation: Graduates' Transitions
667   from Higher Education to Working Life. *Vocations and Learning*, 2(1), pp.1-18.

668   37. Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual review of*
669   *psychology*, *52*(1), pp 1-26.

670   38. Cake, M. A., Bell, M. A., Williams, J. C., Brown, F. J., Dozier, M., Rhind, S. M., & Baillie, S.
671   (2016). Which professional (non-technical) competencies are most important to the success
672   of graduate veterinarians? A Best Evidence Medical Education (BEME) systematic review:
673   BEME Guide No. 38. *Medical teacher*, *38*(6), 550-563.

674   39. Armitage-Chan, E. (2016). Assessing Professionalism: A Theoretical Framework for Defining
675   Clinical Rotation Assessment Criteria. *Journal of Veterinary Medical Education*, pp.1-8.

676

677

678

679
680

681

682

683

684   **Figure 1: Time and Context Model of Professional Identity formation**

685

686   **Legend:** This model depicts three key stages in the novice professional's identity formation. During

687   Stage 1, the "naïve self" represents the student at the start of their veterinary education, with no

688   prior meaningful engagement in the professional environment, and no concept of their professional

689   identity goals. In Stage 2, the student enters the workplace, initially through curriculum

690   opportunities (clinical rotations, external placements) and later as they continue to learn and inform

691   their identity during graduate life. At this stage, identity formation is dependent on how the

692   individual engages with workplace learning opportunities, and whether they use these to inform

693   their developing identity and develop self-environment connections. Self-environment connection is

694   depicted by overlapping shapes. The final stage represents the actions and behaviours of veterinary

695   work, when it becomes apparent whether self-identity is successfully negotiated into professional

696   identity. Successful negotiation enables self-environment-behaviour connections (shown as

697   overlapping shapes): the extent of overlap depicts the extent to which behaviours can be aligned

698   with self-values within the work environment.

699

700

A Time and Context Model of Developing Professional Identity

Fixed Identity	Negotiated Identity	Behaviourist Identity
Naïve Self	Naïve self	Naïve self

Stage 1: Prior to engagement with the profession: student's entry to veterinary school

Fixed Self

Perceived work environment

Actual work environment

Connected self

Work environment

Behaviourist self

Work environment

Stage 2: Exposure to the work environment: student's workplace learning

Fixed Self

Occasional self-aligned behaviours

Behaviours

Work environment

Negotiated self

Behaviours

Occasional non self-aligned behaviours

Work environment

Behaviours

Work environment

Stage 3: Veterinary work: actions, behaviours and decisions of the novice professional