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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

23 **Keywords:** Professionalism, identity, wellbeing, resilience.

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.<sup>1,2</sup> 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.<sup>2</sup> 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.<sup>1</sup> 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.<sup>2</sup> 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.<sup>3</sup>  
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<sup>2</sup> 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.<sup>4</sup> 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).<sup>4</sup> 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.<sup>5-7</sup> Models of medical professional identity development are  
69 available.<sup>2</sup> 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.<sup>8</sup> 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.<sup>9</sup>

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

## 95 **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.<sup>10</sup> 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.<sup>9</sup> 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.<sup>10</sup> 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.<sup>11,12</sup> 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.<sup>13</sup>  
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.<sup>14</sup> 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).<sup>15</sup> 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).<sup>16</sup> 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.<sup>16</sup>

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.<sup>17</sup> 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.<sup>18</sup> 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.<sup>19</sup> 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.<sup>3</sup>

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 Statures.**

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.<sup>5,6,13,20</sup> 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:<sup>21</sup> 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.<sup>22</sup>  
182 Social construction of learning is supported, facilitating members' self-actualization.<sup>23</sup> 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.<sup>13</sup>  
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.<sup>24</sup>

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.<sup>25</sup> 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.<sup>19</sup>

214

215 Marcia’s diffused and foreclosed identity statuses represent naïve and under-developed identities.<sup>25</sup>  
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<sup>26</sup> (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.<sup>23,24</sup> 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<sup>27</sup> and Korthagen<sup>28</sup>.

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.<sup>27</sup> 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.<sup>29</sup> 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*".<sup>30</sup> 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.<sup>28</sup> 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*"<sup>31</sup> ,  
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 perceptions, appreciations, and actions and makes possible the achievement of infinitely  
300 diversified tasks...” (Bourdieu 1998, quoted in Lizardo 2004,<sup>32</sup> 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.<sup>33</sup>

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).<sup>34</sup> 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.<sup>35</sup> 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<sup>26</sup> 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,<sup>2</sup> 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.<sup>36</sup> 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.<sup>36</sup> 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.<sup>23</sup>

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.<sup>26</sup> 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.<sup>36</sup>

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,<sup>30</sup> Bourdieu,<sup>32</sup> Nystrom<sup>36</sup> and Wenger.<sup>23</sup> 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).<sup>37</sup> 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.<sup>24</sup> 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.<sup>24</sup> The students described by Matthew et al,<sup>29</sup>  
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.<sup>6</sup> There is a lack of understanding of the concept of the self (similarly to  
467 Marcia's diffused identity status),<sup>24</sup> 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.<sup>24</sup> Their identity values are constructed  
478 on the basis of understanding the challenges of context and, as described by Ryan and Deci,<sup>16</sup> 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<sup>15</sup> 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.<sup>26</sup> 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<sup>19</sup> and the  
550 potential obstructive influence of the environment.<sup>10</sup> 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.<sup>3</sup> Other authors have highlighted the lack of clear evidence supporting the benefits of  
554 veterinary professionalism teaching.<sup>38</sup> 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<sup>18</sup> 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.<sup>39</sup> 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

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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

Work environment

Occasional non self-aligned behaviours

Behaviours

Work environment

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

