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A Bioecological Perspective on Talent Identification in Junior-Elite Soccer: A Pan-European Perspective

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1 **TITLE:** A Bioecological Perspective on Talent Identification in Junior-Elite Soccer: A
2 Pan-European Perspective

3

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16 Pan-European Perspective

17

18 **Abstract**

19 Elite soccer clubs across Europe spend ever-increasing sums of money on
20 transfers and salaries for world-class players. Consequently, clubs' talent
21 identification and development processes for junior players have become more
22 professionalised. Based on a holistic ecological approach, this study presents an
23 analysis of talent identification practices across some of the most productive
24 soccer academies in Europe ($N = 11$). Data were collected via semi-structured
25 interviews with 11 heads of academy recruitment from clubs in the 'big five'
26 European leagues. Clubs were purposively sampled based on their player
27 productivity ranking. Interviews ranged from 52:26 minutes to 114:06 minutes
28 in length ($m = 87:53 \pm 20.10$ minutes). This study argues that holistic ecological
29 approaches the environments were characterised through the interplay of factors
30 that ranged from high-level internal to international level relationships. This
31 resulted in the identification and recruitment of players from local and
32 international environments. The purpose of recruitment was suggested to have
33 a dual purpose: recruitment of players for the first team; recruitment of players
34 for further development/monitoring and/or selling to another club.

35 **Keywords:** scouting; recruitment; talent selection; ecology; culture

36

37 **Introduction**

38 Professional soccer clubs across Europe are spending ever-increasing sums of money
39 on the transfer fees and salaries of world-class players. Consequently, increasing sums
40 are also being spent on academy level talent identification and development (TID)
41 processes and practices, which continue to become increasingly professionalised
42 (Larsen et al., 2013). Indeed, identifying and developing junior talent in soccer has
43 become a critical issue for clubs and national federations. It is, therefore, unsurprising
44 that the Union of European Football Associations (UEFA) and some national leagues
45 have launched ‘localised’ initiatives designed to promote their TID outcomes
46 (Richardson, et al., 2012); though recent findings suggest that home-grown players
47 have lower employment rates in their home country than players developed elsewhere
48 (Poli, Ravenel, & Besson, 2015; Poli, Ravenel, & Besson, 2018). Whilst there have
49 been a number of initiatives to develop and increase the number of home-grown players,
50 there appears to be wider issues affecting these developments. For example, evidence
51 suggests that the Premier League has the second lowest number of indigenous players
52 when compared to the other major European leagues (*i.e.* Bundesliga, Ligue 1, Serie A,
53 and La Liga) (Littlewood, Mullen, and Richardson, 2011). Whereas, Spain and Italy
54 are highlighted as having the largest percentage of indigenous players in their leagues,
55 suggesting that there are both cultural and philosophical conditions within those
56 countries that encourages players to remain in their native country (Richardson, Relvas
57 & Littlewood, 2013). However, the most recent data suggest that the footballers’ labour
58 market across Europe has become de-territorialized, evidenced by a decreased number
59 of club-trained players at their indigenous club, increased numbers of expatriate players,
60 and greater player mobility; these factors contribute toward difficulties for clubs

61 adhering to league or federation requirements on home-grown talent numbers within
62 their squads (Poli, Ravenel, & Besson, 2018).

63 Identifying and developing elite soccer players is a time-consuming and
64 complicated process (Baker et al., 2018) and it is no surprise that most professional
65 soccer clubs have their own systems and structures for determining the level of
66 complexity they are willing to accept as part of their TID strategy (Richardson, Relvas
67 & Littlewood, 2013). However, it is also important to recognise that ‘identification’ is
68 only the first step (Larkin & Reeves, 2018) in a long and winding talent development
69 road (Baker, Wattie & Schorer, 2019). Therefore, when discussing talent identification
70 and/or selection, it is also important to recognise the integration of the talent
71 development environment and how these mechanisms, processes, and decisions operate
72 at a pragmatic and functional level (Collins, MacNamara & Cruikshank, 2018; Ivarsson
73 et al., 2015). However, we add a note of caution here, as it is not our intention to
74 promote or extend the debate into *what* is talent in sport as this is adequately covered
75 elsewhere (see Baker et al., 2019).

76 In this article, we provide a theoretical insight into the talent identification
77 processes and development environments from some of Europe’s most productive
78 professional soccer academies. In terms of advancing best practice in the field of TID
79 research, Urie Bronfenbrenner’s (1979, 2005) bioecological model of human
80 development acts a useful framework, as it can represent both the dimensions and
81 outcomes of the athletic environment and the roles and functions of the participants
82 involved in the talent recruitment process. Although it must be noted, the working
83 model applied in this paper does not fully correspond with Bronfenbrenner as it does
84 not include the meso and exo levels. However, as Collins, MacNamara and Cruikshank
85 (2018, p. 8) suggest, this still contributes a ‘contextually situated perspective’ to the

86 talent research literature and provides a unique opportunity to examine TID from an
87 applied ecological setting. Specifically, the holistic ecological approach (HEA) to talent
88 in sport (*i.e.* Henriksen, Stambulova, & Rossler, 2010a, 2010b, 2011) shifts the
89 researcher emphasis away from the physical, perceptual-cognitive, technical, and
90 tactical attributes of the individual player to the context of the environment where the
91 player develops (*i.e.* the academy). This shift in focus is represented by two applied
92 theoretical models (Henriksen, Stambulova & Roessler, 2010). The first, which is
93 termed the athletic talent development environment (ATDE), and is defined as a
94 framework that comprises of the following:

95 “...a dynamic system comprising (a) an athlete’s immediate surroundings at the
96 microlevel where athletic and personal development take place, (b) the
97 interrelations between these surroundings, (c) at the macrolevel, the larger
98 context in which these surroundings are embedded, and (d) the organisational
99 culture of the sports club or team, which is an integrative factor of the ATDE’s
100 effectiveness in helping young talented athletes develop into senior elite athletes”
101 (Henriksen, 2010, p. 160).

102 Empirical evidence to support the applied architecture of the ADTE has
103 previously been reported across individual sports such as kayaking (Henriksen,
104 Stambulova & Rossler, 2010), golf (Henriksen, Larsen & Christensen, 2014) and track
105 and field (Henriksen, Stambulova & Rossler, 2010b). The ATDE has also explored the
106 dynamics and interactions between players and coaches in team sports such as soccer,
107 however, these have tended to be restricted to isolated case studies of professional
108 soccer clubs in Scandinavia such as Denmark (Larsen et al., 2013) and Norway
109 (Aalberg & Saether, 2016). The second working model, the environment success
110 factors (ESF), is grounded in organisational psychology (Schein, 1990) and emphasises

111 the organisational culture of the environment. The ESF model comprises a set of
112 preconditions (*i.e.* human, material, financial), the process (*i.e.* training and formal
113 competition), the organisational culture (*i.e.* artefacts) and the team development,
114 which operates in tandem with the ADTE and acts as a framework to measure impact
115 and effectiveness (Henriksen et al., 2010). Features of successful ADTEs have
116 included: inclusive training environments; role models; emphasis on long-term
117 development rather than short-term success; a consistent and rationale organisational
118 culture; and the assimilation of sporting demands.

119 To our knowledge the ADTE and ESF have not been empirically examined
120 across recruitment systems and cultures other than Scandinavia. Furthermore, whilst
121 we understand that the ADTE and ESF were designed, initially, to provide holistic
122 descriptions of the talent development environment, we also believe this could be
123 adapted to offer a more detailed insight into the identification processes that exist within
124 this particular domain. We also agree with Collins et al. (2018) that previous TID
125 research has relied typically on singular methodologies, such as the retrospective recall
126 interviews, and despite the methodological limitations (*i.e.* self-report bias) associated
127 with this methodology it continues to permeate the TID literature. In view of these
128 shared concerns we believe that these two working models has much to offer in terms
129 of how socially constructed interview data can inform the current TID landscape in
130 junior-elite soccer. For instance, the interview guides designed by Henriksen et al.
131 (2010) gathered data that were captured from interviewees in their ‘current’
132 organisational role (*i.e.* coaches, recruitment staff, *etc.*) and, therefore, may go some-
133 way to address the reliability issues associated with retrospective recall. The present
134 study also represents a response to Henriksen et al. (2011) who called for more research
135 of environments in which senior athletes continually achieve top level results.

136 Therefore, the focus of this study was to explore how talent identification is framed
137 within the context of ADTE and operationalised within the ESF at some of the most
138 successful soccer academies in Europe. Specifically, the aims of the present study were:
139 (1) further our understanding of talent identification processes and mechanisms in
140 ATDEs in junior-elite soccer; and (2) examine the factors influencing its success in
141 developing junior-elite soccer players.

142 **Method**

143 *Situated context*

144 Across Europe, a professional soccer academy, defined as an *elite performance*
145 *development environment*, is where potentially talented players are identified and
146 recruited with the aim of becoming professional players (Mills, Butt, Maynard and
147 Harwood, 2012; Larsen *et al.*, 2013). For junior players (*i.e.* 8-16 years old) selected
148 for an academy, especially academies of elite professional clubs, these environments
149 offer some of the very best resources and training facilities (Ashworth & Heyndels,
150 2007). The organisational structure of professional academies can vary, but will
151 typically include personnel such as head of academy/academy director, full-time
152 coaches, part-time assistant coaches, sports scientists, heads of recruitment, and full-
153 time and part-time talent scouts. See Relvas (2010) for a detailed analysis of the
154 organisational structures and working practices of European soccer academies.

155 *Participants*

156 Eleven heads of recruitment aged between 34 and 62 years old (m 48.5, \pm 9.5
157 years) participated in this study. To provide a balanced and geographically diverse
158 perspectives on junior-elite player environments (Mills *et al.*, 2014), heads of

159 recruitment from 11 professional clubs' academies around Europe agreed to participate
160 in this study. Further, to include a depth and richness to the information required (Patton,
161 2002), it was necessary to recruit a sample that could be considered responsible for the
162 identification of players that had progressed to the highest levels of performance within
163 their respective professional leagues. Unlike other staff (*i.e.* coaches, sports scientists),
164 it is not a pre-requisite for a head of recruitment to hold recognised qualifications.
165 Therefore, given the specific nature of the inquiry, participants were recruited on the
166 basis that participants were responsible for the day-to-day recruitment decisions across
167 the academy. Each participant was male and had held their current position between 1.5
168 and 16 years ($m = 8.5$ years, ± 4.8 years).

169 *Procedure*

170 In order to satisfy the stipulated inclusion criteria, the most productive
171 academies, as determined by the Centre International d'Etude du Sport (CIES), were
172 contacted (CIES, 2016). Academies identified in the CIES training club data were e-
173 mailed ($n = 55$), either directly to the named head of recruitment, or addressed for their
174 attention via a club-based email address. There were 16 responses to the original request
175 with a total of 11 heads of recruitment agreeing to participate. This represented a 20%
176 response rate and included responses from professional clubs currently playing in the
177 English Premier League ($n = 3$), French Ligue 1 ($n = 3$), German Bundesliga ($n = 2$),
178 Italian Serie A ($n = 1$), and Spanish La Liga ($n = 2$). Institutional ethical approval was
179 obtained, and informed assent and written consent was provided by all participants.
180 Before starting the interview, participants were reminded of the purpose of the
181 interview and informed they were free to withdraw at any time. There were not
182 considered to be any language barriers as all participants were fluent in English and
183 fully understood the questions that were posed.

184 *In-depth interview guide*

185 As this study formed part of a larger multidisciplinary talent identification
186 project surrounding junior-elite soccer academy environments in the United Kingdom,
187 Western Europe, and Australia, rigour surrounding the pilot testing of interviews was
188 already established (*i.e.* Reeves et al., 2018). All interviews were conducted by the
189 principal researcher over a ten-month period, at dates and times convenient to the
190 participants and included venues such as the respective clubs' academy or stadium
191 offices. The interviews were semi-structured (Kvale & Brinkman, 2009), which
192 enabled the researcher the opportunity to probe issues that were considered important
193 for the identification and development of talented youth soccer players. Similar to
194 Henriksen *et al.*, (2010) the interview guide was divided into four sections. In the
195 introductory part, rapport-building questions (*i.e.* can you tell me a little about your
196 career journey and your current role) were asked. In the descriptive section, the
197 interview guide was informed by the ADTE and ESF models, and questions were asked
198 around the roles and function of the specific components of the identification processes
199 and the relationship between these mechanisms at the micro- and macro-levels. The
200 explanatory section included questions which probed the reasons behind the
201 environments success and factors that included preconditions, process, individual
202 development, and organisational culture. In the final part of the interview further
203 questions were posed that were designed to explore past traditions and future obstacles
204 for the environment. Interviews were digitally recorded and lasted between 52 minutes
205 and 114 minutes ($m\ 87:53 \pm 20.10$ minutes). The combined total of all interviews was
206 ~16 hours. Following each interview critical discussion points were noted in theoretical
207 memos for use during analysis alongside fieldnotes (Rapley,2011).

208 *Data analysis*

209 All audio data were transcribed verbatim with field notes and theoretical memos
210 digitised to aid the analysis process. Transcribed material produced over 607 pages of
211 single-line spaced text (~450,000 words). All transcribed data were imported into QSR
212 NVivo 11 and subjected to constant comparative analysis (Rubin & Rubin, 1995). Data
213 collection and analysis occurred in parallel; with each subsequent interview the
214 generated categories were compared with existing ones to determine whether data
215 produced new discrete categories, became property of an existing category, or
216 represented a category with a higher level of abstraction (Parry, 2004). Analysis began
217 with open coding, whereby data were segmented into meaningful expressions before
218 being coded axially – reassembling the data that had been broken down during the open
219 coding process (Strauss & Corbin, 1998). During the coding process, fieldnotes and
220 theoretical memos were shared amongst the research team, though there was no attempt
221 to seek consensus at this stage. All data treatment was performed by the principal
222 investigator, but final categories, interpretations and concepts of the ADTE and ESF
223 were shared until final agreement was reached. Field notes acted as *aide memoires* but
224 also provided context on interactions and process to support the credibility of data
225 interpretation (Koch, 2006). A final effort to ensure credibility was to share the final
226 proposed ATDE and ESF models with participants (Guba & Lincoln, 1989). In total
227 nine participants responded to our request to review and comment. Aside from some
228 explanatory commentary, there was agreement as to the overall presentation and
229 representativeness of the model from all respondents.

230

231 **FINDINGS & DISCUSSION**

232 *Overview of all Clubs as Talent Environments*

233 This study focussed on 11 of the most productive European academies to
234 understand the talent identification processes and mechanisms in ATDEs in junior-elite
235 soccer, whilst also examining the factors influencing their success in developing elite
236 adult players. The investigation was concerned with the entirety of TID and, thus,
237 focussed on all ages groups as a departure for the describing of the empirical ATDE
238 model of these clubs (see Figure 1). Considering that all components of the environment
239 are interconnected and influence each other, the model demonstrates the most important
240 components and relationships alongside the structure of the environment (Larsen *et al.*,
241 2013). The thickness of arrows demonstrates the closeness of the relationship, with the
242 most important relationships focussed around the *Head of Recruitment*.

243 **Figure 1:** The ATDE Empirical Model of European Talent Identification & Recruitment

244

245 **!INSERT FIGURE 1 ABOUT HERE!**

246

247 *Micro-environment: athletic domain*

248 The micro-environments of the elite clubs were characterised by a range of
249 playing squads which range from pre-academy/development squads (*i.e.* players from
250 u8 down who cannot be officially registered with the national federation by the club),
251 then U9s to U23s.

252 *Club-based support structures* included coaches, assistant coaches, sports
253 scientists (including performance analysts and strength/conditioning coaches), medical
254 services (including physiotherapists, podiatrists, and a medical doctor). Here, staff were
255 qualified in a range of football qualifications (*i.e.* UEFA A licence and Pro-licence) and

256 academic qualifications (*i.e.* BSc, MSc, and in some cases PhD). In addition, all of the
257 clubs involved in the study had relationships with universities – sometimes local,
258 sometimes at distance – and had some form of consultancy or support-role offered by
259 those institutions. To close the research-practice divide these clubs were making best
260 use of research evidence to inform their talent identification and talent development
261 procedures and practices. For example, well established growth, maturation and
262 anthropometric research had permeated through the clubs’ recruitment philosophy, and
263 there was consensus that predictability of talent based on physiology testing alone was
264 flawed. All the clubs adopted assessment protocols for measures of functional capacity
265 but combined these with soccer-specific tests for dribbling, ball control, shooting speed
266 and accuracy and perceptual-cognitive passing tests in congested areas in an attempt to
267 replicate the decision-making demands of competition. Furthermore, imposed
268 environmental constraints (*i.e.* a skewed distribution of selecting players born earlier in
269 a pre-defined age group comparative to those players born later due to an imposed cut-
270 off date), commonly referred to as relative age effects (RAEs; Haycraft, Kovalchik,
271 Pyne, Larkin, & Robertson, 2018) which are known to affect a player’s prospect of
272 becoming a full-time professional (Furley, Memmert, & Weigelt, 2016) were
273 understood across all the clubs in this study. We documented pedagogical age group
274 modification strategies similar to those reported by Mann and van Ginneken (2016),
275 where talent scouts were provided with birthdates of players *a priori* and, in some
276 instances, the decimalisation of players’ ages was provided on training vests during
277 real-time scouting assignments. Integrated age-ordered shirt numbering was also
278 mentioned as a pedagogic means by which academy coaches applied *in situ* age
279 appropriate coaching, thus ensuring technical and tactical skills were provided in
280 positive, supportive and developmentally appropriate environments. These findings are,

281 therefore, at odds with recent qualitative investigations surrounding the implications of
282 RAEs in elite academy environments (Andronikos *et al.*, 2016).

283 From a biological perspective, variations between chronological age and
284 biological maturation was also understood and, in some cases, estimates of
285 skeletal maturity were in place to measure and monitor players classified as late,
286 average or early maturity according to birth date quarter. One club mentioned the
287 adoption of bio-banding strategies following the recommendations of the
288 literature (Cumming *et al.* 2017), that is, adolescent soccer players were grouped
289 according to biological maturation bands given by percentage of predicted mature
290 stature that was attained by participants at a specific chronological age. Together
291 these findings suggest the academies are perhaps more 'educated' about the
292 nuances of talent than has been suggested previously. We recorded no evidence
293 that recruitment staff were mis-understanding anthropometric characteristics as
294 a beneficial variable for future performance, however, saying that, it was outside
295 the scope of this study to capture statistical date-of-birth data, maturational
296 indicators, or anthropometric measures, so we are unable to report as to whether
297 these well-established talent recruitment problems were mediated.

298 Pivotal to the working demands of this model across all these clubs is the
299 relationship between the *head of recruitment, club-based support structures* and other
300 recruitment staff, who were classified as *full-time recruitment staff, local scouts, or at*
301 *distance scouts. Full time recruitment staff* were an essential component of the TID
302 paradigm, mainly responsible for administrative components of talent identification (*i.e.*
303 liaising with scouts regarding games to attend), though these roles also included
304 attending games and observing potentially talented youngsters.

305 *Grassroots clubs (locally)*

306 Local grassroots clubs were largely held as critical components of the scouting
307 and recruitment process. All participants indicated that local clubs and, thus, local
308 players, was “...*what it’s all about...getting youngsters who know and probably*
309 *support the club, playing for the first team if we can...they understand our history, our*
310 *culture*” (Participant ES2). Therefore, the relationships between academy staff (*i.e.*
311 scouts and recruitment) and local clubs was seen as being of paramount importance,
312 but also had a financial benefit as there were lower associated costs with these players
313 during their developmental period (Reeves *et al.*, 2018).

314 *Micro-environment: non-athletic domain*

315 *Education structures* spanned both micro and macro-structures and had close
316 connections with club-based support structures. This was, in part, due to the link
317 between an education officer (or similar) who was employed by the club and acted as a
318 liaison between school and academy. Education was a critical characteristic for all
319 players involved with their respective academies, though the nature of this link varied
320 between clubs and even between individual players at the same club (Christensen &
321 Sørensen, 2009) . Participants highlighted how schools were often seen as useful sites
322 of inside knowledge of an individual players’ behaviour, motivation, and capacity to
323 learn. This insight gathering was typically undertaken by *full time recruitment staff*,
324 including the *head of recruitment*.

325 *Macro-environment*

326 The macro environment comprised people and groups with whom the players
327 do not have regular (*i.e.* at least weekly) contact. In some instances, player contact was

328 not identified at all (*i.e. At Distance Scouts*). Here, it was possible to see the head of
329 recruitment as the cornerstone of communication. Similar to findings from Relvas *et al.*
330 (2010), structural differences were apparent between participating academies, with
331 reserve teams/under 23 teams positioned differently. For example, in England, two of
332 the under 23 squads were all positioned within the academy environment with
333 seemingly tangential contact with the first team, whilst one was embedded alongside
334 the first team. In all instances, the teams were located in the same physical environment
335 (*i.e.* a single site training ground), though separated by organisational and facility-based
336 barriers (Dowling *et al.*, 2018).

337 *Director of Football*

338 The role of the director of football (DoF) is common amongst European football
339 clubs, albeit with slight variances on the title and their associated responsibilities
340 (Parnell *et al.*, 2019). Indeed, the functions performed in this role varied between clubs
341 from a focus on first team recruitment activities to oversight of all club activities
342 including: first team, academy, sports science and medicine, amongst other things
343 (Parnell *et al.*, 2019). This resulted in variance in the types of communication that study
344 participants had with the DoF, and a largely hierarchical structure became apparent.
345 However, regardless of the organisational structure, contact between academy players
346 and academy-level staff (*i.e.* head of academy recruitment) was infrequent, typically
347 once per week, unless there were pressing matters (*i.e.* registration/contractual issues).

348 *First Team*

349 The first team environment was considered the ‘*end goal*’ by participants: their
350 job was summarised as “...*identifying the best potential talent, bringing it to the club,*
351 *allowing it to be developed and hoping that it turns into a professional footballer*”

352 (Participant GR1). There was acknowledgement that the first team environment was
353 used symbolically to motivate and sell the club to potential youngsters looking to join.
354 However, the closeness to the first team environment was suggested to be mostly
355 relevant to the professional development phase within the academy (*i.e.* U17 upwards).
356 Indeed, there is a growth in the research focussing on phases of transition (e.g. Morris,
357 Tod & Eubank, 2017), organisational transitions (*e.g.* Morris, Tod & Oliver, 2015), and
358 stakeholder perceptions (*e.g.* Morris, Tod & Oliver, 2016).

359 *Professional Club (Globally)*

360 Relationships between clubs tended to have a focus on first-team performance,
361 with academies focussed on players within the professional development phase of their
362 careers, mainly exploring the transfer or loan transfer of those players: “*Most stuff tends*
363 *to focus on the first team, and relationships with other clubs is the same...but we have*
364 *to work on it, too. We have lads who need loans and permanent moves and so do those*
365 *clubs, so it helps if there is an existing relationship in place”* (Participant UK3). There
366 was also acknowledgement of the need to be aware of players that might be of interest,
367 what might be considered more traditional recruitment practice, as one participant
368 explained, “*We have good links with clubs around the world...we have to, you never*
369 *know who is going to get spotted and whether you’re going to need to consider*
370 *them...that’s why you need breadth of coverage and why you need to build relationships*
371 *with clubs so you can easily get on the phone and discuss things”* (Participant BE1).
372 There appeared a desire for academies to find the best young talent to develop in order
373 to save money later down the line (Reeves *et al.*, 2018; Pruna, Tribaldos & Bahdur,
374 2018) and relationships emerged as an important aspect of that (Gerke & Wäsche,
375 2019). Indeed, contemporary studies, adopting a network perspective suggest that

376 clubs' success in the transfer of players is strongly associated with their networks and
377 relationships (Liu *et al.*, 2016).

378 *At distance scouts*

379 Academies, as well as first teams, operate a number of scouts at distance,
380 including nationally and internationally. These individuals were unlikely to have
381 regular contact with others at the academy, except for the head of recruitment or,
382 sometimes, recruitment staff. Depending on the size of the club, these scouts sometimes
383 also undertook duties for the first team environment, too. "...we have about a dozen
384 global scouts, some who just do academy-related work, and some who do academy and
385 first team...it depends on where they are [geographically], how well we know them and
386 what they produce...in some of the smaller places, for example Scandinavia, Joris
387 [pseudonym] does about 50:50, first team and academy...we've worked together for a
388 long time and I know I can trust him to get on and do very well and he only comes to
389 me if it's something important" (Participant ES1). Of note, here, was the emphasis on
390 trust between the head of recruitment and scouts working at distance; undoubtedly the
391 operating distance required trust that the work required would be undertaken and that
392 the quality of information would be sufficient to enable clubs to make decisions in a
393 timely manner. "Because of the climate we operate in, we have to try and be first to
394 know things: who's playing well, who's coming through, who's had injury issues, who
395 might be worth keeping an eye on, it's an information industry masked as a football
396 one [laughs]" (Participant UK2).

397 There have been a number of high-profile clubs that have broken rules regarding
398 'tapping up' players, in their own countries and abroad. For example, in 2017 Liverpool
399 FC were banned from signing academy players and fined £100,000 for 'tapping up' a

400 player registered with another club (Hunter, 2017). Participants suggested that in a
401 period of increased scrutiny, it was important to ensure scouts, particularly those
402 operating at distance, were mindful of these issues, and did not engage in practices that
403 might undermine the club’s credibility. *“We do our best to make sure things are done
404 correctly and procedures are followed, but there are lots of moving parts in recruitment
405 and typically, lots of people involved from agents, players, parents and club
406 officials...all wanting to have their input and all having different discussions. It can be
407 a minefield at times”* (Participant UK1).

408 **The ESF working model**

409 The ESF model (Figure 2) represents the factors influencing the success of
410 these 11 clubs in relation to the ADTE. Unlike previous iterations of this model from
411 different sports, we were unable to suitably distinguish between preconditions,
412 process, and organisational development and culture. Thus, these three components
413 overlap in order to demonstrate the strong congruence between them and the
414 inseparable nature of one from another.

415 **Figure 2:** The ESF Empirical Model of European Talent Identification & Recruitment

416

417 **!INSERT FIGURE 2 ABOUT HERE!**

418

419 *Preconditions*

420 Financial resources offered a competitive advantage in the identification of
421 players. Specifically, finance was linked to the global breadth of coverage that a club
422 was able to achieve in their identification efforts. *“We’re lucky that the club takes global*

423 *recruitment seriously...we have invested in this recently...I think because it is always*
424 *getting harder to do what we do”* (Participant IT1). A club’s ability to identify and
425 recruit players internationally was considered closely linked to their international image,
426 as was being able to establish satellite academies. *“Part of being at a club like this is*
427 *realising that we are a global brand and we need to operate like one...having*
428 *academies in other countries is just part of this”* (Participant DE3). Importantly, a
429 club’s history, identity and the expectations of club leaders and fans alike, was a key
430 precondition and manifest in the clubs overall playing philosophy and, thus, recruitment
431 practices (Nesti & Sulley, 2014).

432 *Process*

433 A critical component of identifying talented youngsters, was considering
434 whether they would be suitable for the clubs playing philosophy. *“We have to be sure*
435 *what and who we’re getting involved with...that’s why we spend so much time getting*
436 *to know as much about a player as we can. Their attitude, their resilience, and*
437 *everything else going on in their heads...will they be able to work with us? Are they*
438 *willing to listen and to learn? They are the basic questions we have to answer.”*
439 Recruitment to a club’s academy was typically at the under nine age group, though all
440 participants indicated that they ran a range of ‘pre-academy’ opportunities, though the
441 exact operation of these varied from club-to-club. These pre academies enabled clubs
442 to offer their coaching curriculum to youngsters who might have the potential to join
443 the academy proper at the appropriate age. This was noted as an opportunity for scouts
444 and recruitment staff to begin building and developing relationships with potential
445 future players and their parents. Such relationships with parents can be seen as crucial,
446 with the needs and identities of parents shifting and mutating as their child becomes
447 further enveloped in junior-elite football (Clarke & Harwood, 2014). However, scouts

448 and recruitment staff were also expected to place significant emphasis on building and
449 developing relationships with other stakeholders, including other scouts, grassroots
450 clubs and leagues, regional squads, coaches, and administrators. In essence, no stone
451 was expected to be left unturned in the quest for unearthing potential talent.

452 *Cultural Paradigm*

453 All clubs' facilities were utilised to position the club positively. For example,
454 walls were frequently adorned with large photographs of successful academy teams,
455 academy graduates, and positive written statements. There was also a significant use of
456 club colours on walls and emphasis of the club's philosophy and values around the
457 academy buildings, including reception, waiting areas, gyms, and changing rooms.
458 Such artefacts have been suggested to manifest into the currency and discourse of the
459 club. However, previous work in the UK (Reeves *et al.*, 2018) has suggested that such
460 artefacts do not always manifest in such positive ways, emphasising that culture cannot
461 be built through words and images alone. "*It's important for the boys that messages are*
462 *consistent, probably for some staff, too [laughs]...it's also important that they know*
463 *and are reminded what our goal is. The first-team wall [an artefact, listing all players*
464 *who have passed from the academy to play for the first team] is where it is specifically,*
465 *so every boy has to see it every time they come into the building...a constant reminder*
466 *of why they're here – to become a professional footballer"* (Participant DE1).

467 It was particularly important for *communication* pathways to be *clear, open, and honest*.
468 This, it was suggested, was not related to just scouting and recruitment, but to all club
469 departments. Indeed, due to the fast-paced, fluid, and value entrenched nature of
470 football clubs (Ogbonna & Harris, 2014), culture is, arguably, of greater importance
471 here than in other organisational environments. *Wanting to be the best* referred to being

472 the best scouts and recruiters possible and wanting to be part of a club that was
473 acknowledged for producing players. “...we like to think that we operate, at all times,
474 clearly and honestly with each other, no matter who it is...it’s part of what we are about
475 and helps us to work as well as we can do and achieve the best” (Participant FR1).
476 Continually being aware of the requirements and expectations of the club was an
477 organisational need and cultural norm, but also veered toward being an environmental
478 deliverable. For example, by being sensitive to the requirements and expectations of
479 the club automatically generates an outcome, though it is not necessarily tangible. “Part
480 of being honest with people is setting out exactly what their role is, how we would like
481 them to perform it, what we expect from them – whether it’s formally reported or
482 verbally communicated back – that’s crucial to my guys knowing what we need,
483 knowing what the level is we’re expecting boys to be at...it’s all connected, they have
484 to know our successes to be able to sell the club to others, but they’ve also got to be
485 sure someone they’re putting forward is on that level” (Participant UK3).

486 *Individual Development*

487 Working in football recruitment has, historically, been based on gut feelings, an
488 expert eye, and numerous opinions (Reeves *et al.*, 2018; Day, 2011; Christensen,
489 2009). Though there have been recent attempts by national federations to develop the
490 profession and provide educational development opportunities (Levett, 2018). Whilst
491 there have been limited formal opportunities for scouts and recruitment staff to develop
492 professionally, the norm has been internal professional development (Reeves *et al.*,
493 2018) and an expectation to reflect on their own practice, whether formally or
494 informally. “We have meetings every year, but it’s difficult to get them all [scouts] here
495 at the same time...especially international scouts, we usually have to just talk things
496 through with them on the phone” (Participant FR3).

498 The often-cited single goal of developing players for the first team (Littlewood,
499 Mullen & Richardson, 2011) appeared to no longer be the sole focus of clubs and
500 academies. Whilst that remained a priority, clubs indicated how they now considered
501 different opportunities for players in their development environments. “...*Take this kid,*
502 *for example [pointing out of an office window overlooking a training session taking*
503 *place outside], he’s got good potential, he’s 14 [years old], athletic, good family*
504 *background, does well at school...but he’s not likely to play in our first team...we’ll*
505 *keep hold of him for as long as its right to do so for us and him, and he’ll probably go*
506 *on to have a career in the game somewhere, but it’s not likely to be here. Obviously, I*
507 *can’t say a 100% that’ll be the case, things might suddenly click and he’s exactly right*
508 *for us, but it’s more likely when he gets up to the 18s he’ll get a deal and be sent on*
509 *loan or we’ll look for a more permeant move for him” (Participant UK2).*

510 This effectively shifts the traditional paradigm of football recruitment. Indeed,
511 such approaches have a dual purpose: Firstly, they serve to position the club favourably
512 amongst stakeholders (*i.e.* players and parents). By keeping younger players in the
513 development system for a longer period, they ‘keep the dream alive’ for youngsters,
514 with a view to providing their ‘career in the game’, albeit not necessarily with that club.
515 It also allows the club to demonstrate and emphasise their capacity for player
516 development; even if a players’ endpoint is not with that club, they can legitimately
517 claim they have developed a youngster that has become a professional player. Second,
518 it provides an opportunity for a club to retain a player’s registration, but for the player
519 to go on loan in order to further develop, or to attain a permeant transfer. In both
520 scenarios the parent-club may benefit in multiple ways. For example, the parent-club
521 are able to keep-hold of a player’s registration and let others take responsibility for their

522 development; they are able to reduce their overall wage bill by having another club pay
523 some or all of a player's salary whilst they are on loan; a permanent transfer might be
524 arranged for the player due to the loan and, thus, the club benefits from a transfer fee,
525 but might also benefit over a longer period through contractual agreements (*i.e.* sell-on
526 and appearance clauses) that continue to provide an income after the player has left the
527 club. However, such scenarios would appear to favour those clubs with a strong
528 financial position from which to start (see preconditions), as higher numbers of players
529 has increased costs in salaries, equipment, support staff, *etc.*, and loan deals are not
530 guaranteed, meaning players may be let go (*i.e.* made redundant) if a loan or permanent
531 deal cannot be achieved.

532 **STRENGTHS & LIMITATIONS**

533 This study contains several strengths and limitations. This is the first study, to
534 our knowledge, that has attempted to apply the ATDE and ESF framework outside of
535 Scandinavia. It is also the first attempt to integrate multiple environments into one
536 analysis as well as apply the generic framework to talent identification as opposed to
537 talent development. However, caution must be applied when considering the findings
538 of this study, as the participants and their respective clubs comprised 11 of the most
539 productive academies in Europe. As such, our study does not highlight localised issues,
540 or cultural differences that may be present in different countries, leagues, and clubs.
541 The findings cannot be unconditionally incorporated into other contexts or sports.

542 **CONCLUSION**

543 Professional soccer clubs are notoriously secretive about their talent
544 identification, recruitment, and development procedures and access for researchers to
545 these environments can be a challenge (Roderick, 2006). Using a holistic ecological

546 framework this study examined the talent identification environments of some of the
547 most productive soccer academies in Europe. Findings suggest that there are several
548 key factors that are influential in the identification of talented young players within
549 these clubs including the breadth of coverage at local, regional, national, and
550 international level. This study provides support for the use of ATDE and ESF as a
551 framework for junior-elite football environments to evaluate their talent identification
552 environment and structures. Findings indicate a shift from recruitment to develop
553 players for a clubs' first team, to a multi-faceted talent identification and recruitment
554 process that seeks players who might not quite make the first team, but still retain some
555 value by being loaned or sold for profit. Future studies might consider the interplay
556 between specific aspects identified in this study and to what degree each influences the
557 other.

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