• **آمادگی عمل (action readiness)**: در طول یادگیری، یک فرد با فرصت‌های موجود برای عمل در چشم انداز فراهم ساز، ارتباط تنگاتنگی ایجاد می‌کند. استحکام این جفت شدن منجر به آمادگی عمل می‌شود که در آن فرد متمایل است تا بر اساس فراهم سازهایی که در حین اجرا تشخیص داده شده و مورد استفاده قرار می‌گیرد، عمل کند. در برنامه‌های تمرینی به خوبی طراحی شده، می‌توان آمادگی عمل را افزایش داد.

• **وفاداری به عمل (action fidelity)**: او تا چه حد نیازمندی‌های حرکتی یک تکلیف در دنیای واقعی را شبیه سازی می‌کند یا در شرایط تمرین عمل را باز تولید می‌کند. کاهش وفاداری به عمل به این معنی است که پاسخ‌های حرکتی کمرنگ می‌شود، یا در فعالیت شبیه سازی شده، عمل به طور دقیق بازتولید نمی‌شود.

• **انطباق‌پذیری (adaptability)**: ظرفیت سیستم حرکتی برای انطباق با محدودگرها جهت برآوردن هدف تکلیف بطور پیوسته.

• **یادگیری عاطفی (affective learning)**: هنگامی که یادگیری حرکتی، پاسخ هیجانی را تصدیق و شبیه سازی می‌کند که بطور معمول با اجرای یک فعالیت مرتبط است.

• **فراهم ساز (affordance)**: جیمز گیبسون (۱۹۷۹) واژه فراهم ساز را برای توصیف ویژگی‌های محیط به کار برد که فرصت‌ها یا امکاناتی برای عمل برای هر فرد با ظرفیت‌های مناسب برای این تعاملات را فراهم می‌کند. اخیراً راب ویتاگن و همکارانش پیشنهاد داده‌اند که فراهم سازها می‌تواند به عنوان فراخوان‌هایی برای عمل توصیف شود که توصیف می‌کند چگونه افراد فراهم سازها را تشخیص داده و بین آنها انتخاب می‌کنند. ارتباط با یک فراهم ساز به قدرت پیوند بین ورزشکار و فراهم ساز بستگی دارد.

• **نیروی ارشمیدس (Archimedes force)**: نیروی شناوری یا بالابری ایجاد شده در هنگامی که یک شی جامد در سیال به طور کامل یا تا حدی، غوطه ور می‌شود. اصل ارشمیدس نشان می‌دهد که این نیرو برابر با وزن سیالی است که شی را جابجا می‌کند.

• **هوش ورزشکار (athlete intelligence)**: یک اجراکننده هوشمند در زمینه‌های کاری، آموزشی، ورزشی و نظامی، فردی بسیار انطباق پذیر است که ظرفیت تصمیم گیری و حل مسائل را در شرایط پیچیده و پویا، پرورش داده است.

• **جاذب‌ها (attractors)**: الگوهای پایدار و کارکردی سازمان که بوسیله سیستم‌های باز، نمایش داده می‌شود.

• **تناسب (attunement)**: فرآیندی که از طریق آن اجراکنندگان یاد می‌گیرند که اطلاعاتی که برای هدایت اعمال شان مناسب است را شناسایی کرده و از آنها استفاده کنند.

• **خودمختاری (autonomy)**: احساس کنترل و آزادی که افراد در انتخاب کردن دارند. یکی از سه سازه اصلی نظریه خودمختاری.

• **اطلاعات رفتاری (behavioral information)**: اطلاعاتی که کمک می‌کند به تعیین اینکه چگونه یک عمل باید اجرا شود. به عنوان مثال، دستگیره در وسایل و درها به تعیین آن کمک می‌کند که چگونه وسیله یا در را باید چنگ زد و جابجایش کرد.

• **دو شاخگی (bifurcation)**: شکاف در فضای فازی سیستم حرکتی، جایی که حداقل دو الگوی کیفی متفاوت در دسترس است.

• **تنظیم (calibration)**: انطباق نقطه به نقطه قابلیت‌های شخصی افراد با نیازمندی‌های ارائه شده بوسیله یک تکلیف.

• **هم انطباقی (coadaptation)**: در زیست شناسی تکاملی، اصطلاح هم انطباقی به این اشاره دارد که چگونه یک گونه، ساختار و کارکردش را با تغییرات موجود در گونه‌های دیگر یا محیط تطبیق می‌دهد. در مقیاس کوچکتر یادگیری، رشد و اجرا، ورزشکاران انفرادی می‌توانند از فرآیند هم انطباقی استفاده کنند تا رفتارهای شان را با توجه به محیط تمرین طراحی شده توسط مربی یا فعالیت‌های تاکتیکی یک رقیب، تعدیل کنند.

• **حرکت‌های هم انطباقی (coadaptive moves)**: چگونه اجراکنندگان برای اطمینان از تناسب موفق بین محیط و نیازمندی‌های تکلیف حرکت می‌کنند. چنین اعمالی در پاسخ به تغییرات درک شده در موقعیت اجرا انجام می‌شود.

• **شناخت (cognition)**: ابقاء کنشگری سیستم محیط – اجراکننده که بوسیله ادراک و عمل هماهنگ شده، حاصل می‌گردد.

• **صلاحیت (competence)**: احساس یک فرد مبنی بر اینکه می‌تواند نتیجه معینی را به استاندارد مورد نیاز برساند. یکی از سه سازه اصلی نظریه خودمختاری.

• **سیستم‌های انطباقی پیچیده (complex adaptive systems)**: پیچیدگی به سیستم‌هایی اطلاق می‌شود که از نظر فنی دارای دو یا چند بخش تعاملی هستند (اغلب در مقیاس صدها، هزاران و ...). در حالی که این سیستم‌ها با تغییرات در محیط اجرا، انطباق می‌یابند، این پتانسیل تعامل بین اجزا است که می‌تواند منجر به ظهور رفتارهای غنی شود. حساسیت به اطلاعات پیرامونی و پتانسیل ایجاد همکوشی‌های بین اجزای سیستم (ساختارهای هماهنگ که می‌توانند به این سیستم‌ها به منظور دستیابی به اهداف اجرا، کمک کنند) دو ویژگی تعیین کننده، سیستم انطباق پذیر پیچیده هستند.

• **تثبیت (consolidation)**: فرآیندی که طی آن ثبات الگوی حرکتی در غیاب تمرین بدنی (به عنوان مثال، پس از تمرین یا خواب) افزایش می‌یابد. در روانشناسی شناختی به عنوان یادگیری آفلاین نامیده می‌شود.

• **ساختار هماهنگ (coordinative structure)**: توصیف برنشتاین از راه حل‌های ابتدایی که توسط سیستم حرکتی انسان در مراحل اولیه یادگیری به کار گرفته می‌شود.

• **خلاقیت (creativity)**: کشف و ایجاد، از طریق رفتارهای اکتشافی حاصل از فراهم سازهای غیر متعارف.

- **تصمیم گیری (decision making)**: تغییر حالت‌ها در طی عمل.
- **دیجنریسی (degeneracy)**: توانایی عناصری که از نظر ساختاری برای اجرای کارکردی مشابه یا بروندادی مشابه، متفاوت هستند.
- **درجات آزادی (dfs) (degrees of freedom)**: اجزای مستقل یک سیستم که می‌توانند به طرق مختلف در کنار هم قرار گیرند.
- **دپارتمان روش شناسی (department of methodology)**: ادغام کارگروهی از تمرین دهندگان ورزشی که تحت یک چارچوب نظری واحد برای حمایت از یادگیری ورزشکاران و آمادگی برای سطوح بالایی اجرای ورزشی با یکدیگر همکاری می‌کنند. این گروه از تمرین دهندگان می‌توانند شامل، مربیان، مربیان بدن سازی و آمادگی جسمانی، روانشناسان، متخصصان سلامتی و تندرستی، آنالیزورهای اجرا، متخصصان بالینی و توانبخشی، سرپرست‌ها و مدیران باشد.
- **سیستم‌های پویا (dynamical systems)**: سیستم‌هایی که با گذر زمان تغییر می‌کنند و از حالت‌های مختلف سازمان مانند: ثبات، بی ثباتی و متا استبیلیتی عبور می‌کنند، در طبیعت به عنوان پویا در نظر گرفته می‌شوند. رفتارهای چنین سیستم‌هایی را می‌توان از نظر ریاضی مدل سازی کرد تا حالات سازماندهی انها و همچنین مسیرهای ناپایدارشان را توصیف کرد.
- **تنوع بخشی زودهنگام (early diversification)**: یکی از راههای متعدد برای پرورش استعدادهاست. در تنوع بخشی زود هنگام، در دوران کودکی، یادگیرنده تا حدود سن بلوغ در معرض انواع فعالیت‌های ورزشی و جسمانی متنوع قرار می‌گیرد. در این زمان (سن بلوغ)، یادگیرنده شروع به تخصصی شدن در ورزش مورد علاقه اش می‌کند.
- **مشارکت اولیه (early engagement)**: شامل نمونه متنوعی از فعالیت‌ها در اوایل دوران کودکی و به دنبال آن مشارکت در فعالیت‌های تفریحی است که به جای اجرای ورزشی، بیشتر بر تناسب اندام و سلامتی تمرکز دارند.
- **تخصصی شدن زود هنگام (early specialization)**: به طور معمول شامل مقدار زیادی تمرین شدید (اغلب بطور تعمدی) در یک ورزش خاص، با مقدار کمی فعالیت بازیگونه در یک ورزش و تجربه نسبتا کمی از ورزش‌های دیگر یا بدون هیچ تجربه‌ای از ورزش‌های دیگر در سالهای اولیه است.
- **پویایی‌های بوم شناختی (ecological dynamics)**: چارچوبی نظری که ترکیبی از ایده‌های کلیدی روانشناسی بوم شناختی و نظریه سیستم‌های پویا است.
- **کارآمدی‌های حرکتی (effectivities)**: قابلیت‌های حرکتی مانند: قدرت، توان و چابکی که برای افراد امکان حرکت کردن بطور کارآمد را فراهم می‌کند.
- **شناخت‌های جسمیت یافته (embodied cognitions)**: پردازش شناختی که به طور ضمنی قابلیت‌های عملی افراد را تخمین می‌زند.
- **ظهور یا پیدایش (emergence)**: وقوع خود جوش رفتار بر اساس تعامل محدودگرهایی که از پیش تعیین یا برنامه ریزی نشده اند.
- **محدودگرهای محیطی (environmental constraints)**: جنبه‌های فرهنگی اجتماعی و متغیرهای فیزیکی مانند: نور، دما، ارتفاع محیط، گرانش یا نیروی ارشمیدس.
- **اگزوسیستم (به عنوان مثال، جمعیت شناسی) (exosystem (e.g., demography))**: اگزوسیستم شامل تنظیماتی است که فرد در حال رشد در آن سهیم است. این یکی از چهار سطح در مدل زیست بوم شناختی رشد است.
- **دید مرکزی (foveal vision)**: بخش کوچکی از میدان بینایی است که در آن تشخیص ویژگی‌های دقیق امکان پذیر است. حفره فویا (fovea)، ناحیه کوچکی در شبکیه است که بالاترین سطح بینایی را ارائه می‌دهد.
- **انتقال عمومی (general transfer)**: هنگامی است که پویایی‌های ذاتی و تکلیف همکاری نزدیکی با یکدیگر نداشته باشد و فرد ورزشکار پتانسیل توسعه بیشتر در ظرفیتهای عمومی را داشته باشد که به عنوان بخشی از پویایی درونی فعلی اش وجود دارد.
- **خوگیری (habituation)**: آشنایی مجدد با فعالیت یا محیطی که اجرای متعاقب را تسهیل می‌کند. اثرات خوگیری، به اجرا متغیرتر منجر می‌شود تا زمانی که دیگر به خوگیری نیازی نیست.
- **محدودگرهای اطلاعاتی (informational constraints)**: اشکال مختلف انرژی که در سیستم جریان دارد.
- **قصدمندی (intentionality)**: جهت دار بودن یا هدفمند بودن نسبت به اشیا، رویدادها یا افراد.
- **ثابت‌ها (invariants)**: ویژگی‌های آرایه اطلاعاتی که با وجود تغییر چشم انداز دریافت کننده، ثابت یا بدون تغییر باقی می‌مانند یا ویژگی درک شده نسبت به فرد.
- **دانش در مورد (knowledge about)**: ادراک شکل گرفته بواسطه زبان، تصاویر و سایر نمادها که ممکن است اعمال آینده را مقید کند.
- **دانش (knowledge of)**: ادراک مبتنی بر اطلاعات برای کنترل عمل که مقید کننده عمل حقیقی است.
- **سیستم کلان (به عنوان مثال، بافت تاریخی ملی) (macrosystem (e.g., national historical context))**: وسیع‌ترین سطح مدل زیست بوم شناختی رشد است که شامل لینک‌های بین تمام سطوح فرعی دیگر است.
- **مزوسیستم (به عنوان مثال، مرکز آموزش) (mesosystem (e.g., training facility))**: مستلزم روابط متقابل بین دو یا چند زمینه است که

شخص در حال رشد را در برمی گیرد. هنگامی که افراد بین میکروسیستم‌ها حرکت می‌کنند، آنها یک مزوسیستم را ایجاد می‌کنند. یکی از چهار سطح تو در تو در مدل زیست بوم شناختی رشد است.

• **متااستبیلتی (metastability)**: ظرفیت یک سیستم برای اخذ چندین حالت پایدار با احتمال مساوی را متااستبیلتی گویند. متااستبیلتی، قابلیت انعطاف پذیری درونی را برای سیستم حرکتی فراهم می‌کند برای اینکه با موقعیت ها، سناریوها و چالش‌های مختلف، هماهنگ شود.

• خرده سیستم (به عنوان مثال، حمایت خانواده) (microsystem (e.g., family support)): درونی‌ترین سطح مدل زیست بوم شناختی است که در آن فرد در حال رشد به طور مستقیم با ویژگی‌های فیزیکی، اجتماعی و نمادین بدیهی محیط اش ارتباط برقرار می‌کند.

• گشتاور اینرسی (moment of inertia): مقاومت یک جسم در برابر حرکت را گویند. با استفاده از جرم یک وسیله و شعاع چرخش اش، محاسبه می‌گردد.

• آموزش غیر خطی (nonlinear pedagogy): رویکرد آموزشی با اصول طراحی خاص که بر اساس درک اینکه چگونه رفتارهای هدفمند از تعامل محدودگرها پدیدار می‌شوند، بر یادگیری اکتشافی تاکید دارد.

• غیر خطی بودن و عدم تناسب (nonlinearity and nonproportionality): مربوط به تناسب علت – معلول است. در یک سیستم خطی، قبل از تغییری بزرگ در رفتار سیستم، باید تغییری بزرگ در سیستم توسط علت یا علل اش ایجاد شود، در حالی که در سیستم‌های غیر خطی، تغییرات بزرگ در علل، ممکن است تغییرات کیفی جزئی یا بزرگی در رفتار سیستم ایجاد کند، اما پایداری چندگانه ایجاد نمی‌کند.

• اطلاعات غیر اختصاصی (nonspecifying information): اطلاعاتی که مستقیما پاسخ حرکتی را مشخص نمی‌کنند یا متصل به آن نیستند. در حالی که به طور بالقوه غیرقابل اعتماد هستند، می‌توان از چنین اطلاعاتی استفاده کرد برای پیش بینی نحوه‌ی بهتر حرکت کردن و انطباق یافتن با شرایط خاص.

• یادگیری مشاهده‌ای (observational learning): فرآیندی که در آن یادگیرنده الگوهای رفتاری و اعمال دیگران را به عنوان نتیجه مستقیم مشاهده این رفتارها، اتخاذ یا تکرار می‌کند.

• انسداد (occlusion): به نوعی مسدود کردن، پوشاندن یا محدود کردن بینایی.

• آرایه بصری (optic array): میدان اطلاعاتی که توسط ارگانیسم با ویژگی‌های حسی که با نور هماهنگ هستند، قابل تشخیص است (به عنوان مثال، افراد دارای سیستم بینایی سالم).

• محدودگرهای ارگانیسمی (organismic constraints): ویژگی‌های یک فرد است. آنها می‌توانند ساختاری مانند: ژنوتیپ و پارامترهای تن سنجی یا کارکردی مانند: انگیزه‌ها و احساسات باشند.

• پلادا (pelada): یک سبک غیررسمی و انتخابی فوتبال (در بین سایر نقاط) که در برزیل تمرین می‌شود. به معنای واقعی کلمه از زبان پرتغالی، به عنوان فوتبال برهنه ترجمه می‌شود.

• چشم انداز ادراکی – حرکتی (perceptual-motor landscape): مجموعه‌ای از تمام احتمالات ممکن حرکتی که برای یک فرد در دسترس است.

• اختشاش (perturbation): اختلال در سیستم حرکتی انسان.

• فضای فازی (phase space): تمام حالات فرضی سازمان که یک سیستم پویا می‌تواند در آنها تکامل یابد.

• محدودگرهای جسمانی (physical constraints): ویژگی‌های ساختاری یا کارکردی سیستم حرکتی انسان.

• چند پتانسیلی (pluripotentiality): پتانسیل درگیری یا حذف درجات آزادی بیومکانیکی برای افزایش ثبات یا انعطاف پذیری سیستم را چندجانبه بودن گویند. شرح می‌دهد که چگونه می‌توان یک ساختار همکوشی را برای تعداد زیادی کارکرد ترسیم کرد.

• کنترل آینده نگر (prospective control): چگونه عمل کننده ها، رفتار را از قبل با محدودگرهای فیزیکی و اطلاعاتی در محیط انطباق می‌دهند.

• ارتباط داشتن (relatedness): احساس فرد از تناسب اجتماعی، تعلق به یک گروه یا شبکه را مرتبط بودن گویند. یکی از سه سازه اصلی نظریه خودمختاری.

• حرکت نسبی (relative motion): روابط فضایی – زمانی خاص بین اندام‌ها و درون اندام‌ها و همچنین سازمان اندام‌های اجرا کننده نسبت به محیط اطراف.

• الگوی معرف (representative design): مفهوم مهمی که توسط روانشناس بوم شناختی یعنی اگون برانزویک (۱۹۵۶) معرفی شد، اشاره دارد به درجه‌ای از اینکه یک محیط تا چه حد معرف محیط اصلی است که شبیه سازی شده است.

• روش پایش (scanning procedure): یک تکنیک آزمایشی است که از طریق آن می‌توان پویایی‌های درونی یادگیرنده را آشکار کرد.

• خود سازماندهی (self-organization): ظرفیت یک سیستم پیچیده برای سازماندهی خودش در الگوهای ترتیبی و منظم در هنگامی که تحت محدودگرها قرار می‌گیرند. برای ایجاد خود سازماندهی، هیچ سازمان دهنده مرکزی یا برنامه ذخیره شده‌ای لازم نیست.

• فراهم سازهای اشتراکی (shared affordances): فراخوان برای اعمالی که توسط تمام اعضای یک تیم درک می‌شود. توانایی درک و استفاده از فراهم سازهای اشتراکی که در اجرا ظهور پیدا می‌کنند، از هماهنگی اعمال در همکوشی‌های تیمی پشتیبانی می‌کند که در جهت موضعی به

کلی شکل می‌گیرند.

- انتقال (shift): تغییر ظریف در پویایی‌های الگو که می‌تواند با یادگیری همراه باشد. برخلاف یک تغییر کلی و مشخص (انشعاب)، انتقال‌ها معمولا تدریجی و از نظر اندازه کوچکتر هستند.
- تشابه (similarity): یک اصطلاح چند بعدی که میزان شباهت بین تکالیف را توصیف می‌کند. می‌تواند بر اساس شباهت حرکتی، پیچیدگی تکالیف یا نزدیکی تکالیف در فضای کاری ادراکی- حرکتی بیان شود.
- انتقال اختصاصی (specific transfer): می‌تواند تحت محدودگرهای تکلیف تمرینی ظاهر شود که در آن پویایی‌های درونی موجود یک فرد با پویایی‌های یک تکلیف جدید که باید آموخته شود، با یکدیگر بطور همزمان عمل می‌کنند، در حالی که ظهور رفتارهای عملکردی موفق را تسهیل می‌کند.
- اطلاعات اختصاصی (specifying information): اطلاعاتی که می‌توانند برای تنظیم مستقیم یک عمل استفاده شوند.
- ثبات (stable): استحکام در برابر آشفتگی‌های داخلی یا خارجی.
- همکوشی‌ها (synergies): شکل گیری روابط کارکردی بین اجزای یک سیستم انطباق پذیر پیچیده را همکوشی گویند. در ورزش‌های گروهی برای دستیابی به اهداف تکلیف که بر اساس اصول بازی است، همکوشی‌ها هماهنگی اعمال گروهی کارکردی بازیکنان را پی ریزی می‌کند، (به عنوان مثال، برای پیشروی به سمت منطقه گلزنی حریف یا دفاع از فضا به صورت دسته جمعی).
- محدودگرهای تکلیف (task constraints): اهداف تکلیف، قوانین خاص مرتبط با یک فعالیت، وسایل یا ابزارها، سطوح، نواحی و علامت گذاری مرزها مانند: پیاده روها، موانع، خط کشی و پست ها.
- ساده سازی تکلیف (task simplification): اصلاح سیستماتیک محدودگرهای تکلیف برای ارائه یک تکلیف چالش برانگیز بدون قربانی کردن الگوی یادگیری معرف (یعنی، حفظ پیوندهای مهم اطلاعات - حرکت).
- تاو (tau): نمادی که به یک ثابت بصری اختصاص داده می‌شود که ممکن است به کنترل و هماهنگی اعمال رهگیری کمک کند. تاو اطلاعات بصری مشخص شده توسط نرخ نسبی انبساط زاویه سه بعدی بینایی را نشان می‌دهد که توسط خطوط یک شی یا سطح درک شده محصور شده است.
- تغییر حالت (transitions): تغییراتی از یک حالت هماهنگی به حالت دیگر که هدفمند نیستند، اما منتج شده از ویژگی‌های خودسازماندهی سیستم حرکتی هستند.
- بازی بدون ساختار (unstructured play): فعالیت‌های تمرینی که تحت نظارت یا هدایت مربی، معلم یا داور (رسمی) نیستند.

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