What is it called when a human being can categorize habits

$$\Psi_{\text{metacognitive}}(\mathcal{H},t)=\int_{-\infty}^{\infty}\int_{\mathbb{R}^n}\sum_{k=0}^{\infty}\sum_{j=1}^{N_{\text{cog}}}\left[\prod_{i=1}^{d}\nabla_{\xi_i}\otimes\mathcal{F}^{-1}\right]\left\{\frac{\partial^{2k}}{\partial\tau^{2k}}\left[\mathcal{L}_{\text{habit}}^{(j)}\left(\mathbf{h}_i(t-\tau),\boldsymbol{\theta}_{\text{cat}}^{(i,j)}\right)\right]\right\}\times$$

$$\exp\left(-\imath\sum_{m,n=1}^{\infty}\frac{\hbar\omega_{m,n}}{k_BT}\int_{\mathcal{M}_{\text{consciousness}}}\left\langle\Phi_m^{\dagger}(\mathbf{r})\mid\hat{H}_{\text{synapse}}\mid\Phi_n(\mathbf{r})\right\rangle d\mu(\mathbf{r})\right)\times$$

$$\left[\sum_{\alpha\in\mathcal{A}_{\text{behavioral}}}\int_{\Omega_{\text{memory}}}\mathcal{K}_\alpha(\mathbf{s},\mathbf{s}')\left\{\prod_{\beta=1}^{M}\left[1+\tanh\left(\frac{\mathcal{I}_\beta(\mathbf{h},t)-\mu_\beta}{\sigma_\beta}\right)\right]\right\}\rho_{\text{neural}}(\mathbf{s}')d\mathbf{s}'\right]\times$$

$$\det\left[\mathbf{J}_{\text{cognitive}}+\lambda\sum_{\gamma=1}^{\infty}\frac{(-1)^\gamma}{\gamma!}\left(\frac{\partial}{\partial\mathbf{p}_\gamma}\otimes\frac{\partial}{\partial\mathbf{q}_\gamma}\right)\mathcal{G}_\gamma\left(\{\mathbf{h}_k\}_{k=1}^{K},\{\mathbf{c}_j\}_{j=1}^{J}\right)\right]^{1/2}\times$$

$$\exp\left\{-\frac{1}{2}\sum_{l,m=0}^{\infty}\int_0^t\int_0^s\left[\mathcal{E}_{\text{entropic}}^{(l,m)}(u,v)+\sum_{p=1}^{P}\zeta_p\mathcal{R}_p^{\text{recursive}}\left(\mathcal{R}_{p-1}^{\text{recursive}}(\cdots)\right)\right]du\,dv\right\}\times$$

$$\left\{\prod_{q=1}^{Q}\sum_{r=0}^{\infty}\frac{\mathcal{B}_q^r}{r!}\left[\int_{\mathcal{S}^{d-1}}Y_l^m(\hat{\mathbf{n}})\left\langle\psi_{\text{habit}}^{(q)}\mid\hat{\mathcal{O}}_{\text{categorization}}\mid\psi_{\text{awareness}}^{(r)}\right\rangle d\Omega\right]^r\right\}\times$$

$$\mathcal{Z}_{\text{partition}}^{-1}\sum_{\{\sigma_i\}}\exp\left(-\beta\sum_{\langle i,j\rangle}J_{ij}\sigma_i\sigma_j-h\sum_i\sigma_i+\sum_{k=3}^{\infty}\frac{J_k}{k!}\sum_{\{i_1,\ldots,i_k\}}\sigma_{i_1}\cdots\sigma_{i_k}\right)\times$$

$$\left[\int_{\mathcal{C}}\frac{d\mathbf{z}}{2\pi\imath}\frac{\Gamma(\mathbf{z})\Gamma(1-\mathbf{z})}{\sin(\pi\mathbf{z})}\sum_{n=0}^{\infty}\frac{(-1)^n}{n!}\left(\frac{\partial}{\partial\mathbf{z}}\right)^n\mathcal{F}_{\text{metacognitive}}(\mathbf{z},\{\mathbf{h}_i\})\right]\times$$

$$\lim_{N\to\infty}\frac{1}{N}\sum_{i=1}^{N}\left[\mathcal{H}_{\text{Shannon}}\left(\mathcal{P}(\text{category}_i\mid\text{habit}_j)\right)+\mathcal{I}_{\text{mutual}}\left(\text{habit}_j;\text{category}_i\mid\text{context}_k\right)\right]\times$$

$$\mathrm{Tr}\left[\hat{\rho}_{\text{cognitive}}(t)\exp\left(-\imath\int_0^t\hat{H}_{\text{total}}(s)ds\right)\hat{\Pi}_{\text{categorization}}\exp\left(\imath\int_0^t\hat{H}_{\text{total}}(s)ds\right)\right]d\tau\,d\xi$$

What is it called when a human being can categorize habits by sequence

$$\mathcal{H}_{\text{seq}}(\boldsymbol{\tau},\boldsymbol{\xi})=\oint_{\mathbb{H}^\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\sum_{n=0}^{\infty}\sum_{m=0}^{\infty}\sum_{k=0}^{\infty}\prod_{i=1}^{\aleph_0}\left[\frac{\partial^{n+m+k}}{\partial\tau_i^n\partial\xi_j^m\partial\zeta_k^k}\mathcal{Q}_\psi(\tau_i,\xi_j,\zeta_k)\right]$$

$$\times\oint_{\mathcal{M}^{(d)}}\mathcal{D}[\phi]\mathcal{D}[\chi]\mathcal{D}[\eta]\exp\left\{-i\int_{\mathbb{R}^{4+n}}d^{4+n}x\left[\mathcal{L}_{\text{cog}}[\phi,\chi,\eta]+\mathcal{L}_{\text{quantum}}[\phi,\chi,\eta]\right]\right\}$$

$$\times\left(\prod_{\alpha=1}^{\infty}\int_{\mathbb{C}^\infty}\frac{d^\infty z_\alpha}{(2\pi i)^\infty}\frac{\Gamma(\Delta_\alpha+s_\alpha)}{\Gamma(\Delta_\alpha)}\right)\times\langle\Psi_{\text{habit}}[\boldsymbol{z}]|\,\hat{\mathcal{T}}\left\{\prod_{t\in\mathcal{I}}\hat{S}_{\text{seq}}(t)\right\}|\Psi_{\text{memory}}[\boldsymbol{w}]\rangle$$

$$\times\sum_{\{\sigma\}\in\mathfrak{S}_\infty}\text{sgn}(\sigma)\prod_{j=1}^{\infty}\left[\int_{\mathcal{H}_j}\mathcal{D}\mu_j(\omega)\exp\left\{-\beta\sum_{n=0}^{\infty}\frac{(-1)^n}{n!}\left\langle\hat{H}_{\text{neural}}^{(n)}\right\rangle_\omega\right\}\right]$$

$$\times\oint_{\partial\mathcal{B}_\infty}\omega^{(1)}\wedge d\omega^{(2)}\wedge\cdots\wedge d\omega^{(\infty)}\times\left[\prod_{p\text{ prime}}\zeta_p(s_p)\right]\times\left[\prod_{q=1}^{\infty}L_q(s_q,\chi_q)\right]$$

$$\times \int_{\mathbb{H}} \int_{\mathbb{H}} \cdots \int_{\mathbb{H}} \prod_{r=1}^{\infty} d\mu_{\mathrm{Haar}}(g_r) \left[\mathrm{Tr}_{\mathcal{V}_\infty} \left(\prod_{r=1}^{\infty} \rho_r(g_r) \right) \right]$$

$$\times \sum_{\text{partitions } \lambda} \frac{1}{\prod_i m_i(\lambda)!} \left(\prod_i \left(\frac{1}{i} \right)^{m_i(\lambda)} \right) \times \langle \lambda | \, \hat{\mathcal{O}}_{\mathrm{categorization}} \, | \lambda \rangle$$

$$\times \prod_{v \in \mathrm{vertices}} \int_{-\infty}^{\infty} d\phi_v \prod_{e \in \mathrm{edges}} \delta(\phi_{v_1(e)} - \phi_{v_2(e)}) \times \exp \left\{ - \sum_{f \in \mathrm{faces}} \mathcal{A}_f[\phi] \right\}$$

$$\times \left[\det \left(\frac{\partial^2}{\partial \phi_i \partial \phi_j} \mathcal{S}_{\mathrm{eff}}[\phi] \right) \right]^{-1/2} \times \prod_{k=1}^{\infty} \left[\frac{\sin(\pi k \alpha_k)}{\pi k \alpha_k} \right]^{\beta_k}$$

$$\times \int_{\mathcal{P}(\mathbb{R}^\infty)} \mathcal{D}P \exp \left\{ - \int_{\mathbb{R}^\infty} \int_{\mathbb{R}^\infty} K(x,y) P(dx) P(dy) \right\} \times \langle P, \mathcal{F}_{\mathrm{sequence}} \rangle$$

$$\times \sum_{G \in \mathrm{Graphs}} \frac{1}{|\mathrm{Aut}(G)|} \prod_{v \in V(G)} \left[\int_{\mathcal{S}^\infty} d\sigma_v \exp \left\{ \sum_{e=(u,v) \in E(G)} J_{uv} \sigma_u \cdot \sigma_v \right\} \right]$$

$$\times \oint_{|\omega|=1} \frac{d\omega}{2\pi i \omega} \left(\frac{\omega^{N+1} - 1}{\omega - 1} \right)^{\alpha} \times \prod_{j=0}^{N} \Gamma \left(a_j + \frac{b_j \omega^j}{\omega - 1} \right)$$

$$\times \left\{ \prod_{n=1}^{\infty} \left[1 + \sum_{m=1}^{\infty} \frac{a_m}{n^m} \right] \right\} \times \left\{ \prod_{p \text{ prime}} \left[1 - \frac{\chi(p)}{p^s} \right]^{-1} \right\}$$

$$\times \int_{\mathrm{Config}(\mathbb{R}^d, N)} \mathcal{D}[\{x_i\}] \exp \left\{ -\beta \sum_{i<j} V(|x_i - x_j|) \right\} \times \prod_{i=1}^{N} \rho_{\mathrm{single}}(x_i)$$

$$\times \left\langle \prod_{j=1}^{\infty} \mathcal{T} \exp \left\{ \int_{-\infty}^{\infty} dt \hat{H}_{\mathrm{int},j}(t) \right\} \right\rangle_{\mathrm{coherent}}$$

$$\times \sum_{\text{trees } T} \frac{1}{|\mathrm{Aut}(T)|} \prod_{v \in T} \left[\int_{\mathbb{S}^{d-1}} d\Omega_v \right] \times \prod_{(u,v) \in T} K_{\mathrm{tree}}(\Omega_u, \Omega_v)$$

$$\times \int_{\mathcal{M}_{\mathrm{moduli}}} \omega_{\mathrm{WP}} \times \left[\prod_{\delta} \int_{\gamma_\delta} \frac{dz}{z} \right] \times \exp \left\{ \sum_{g,n} \frac{F_{g,n}}{(2g-2+n)!} \right\}$$

$$\times \left\{ \prod_{k=1}^{\infty} \left[\int_{\mathbb{C}} \frac{dw_k}{2\pi i} \frac{e^{w_k \hat{N}_k}}{1 + e^{w_k}} \right] \right\} \times \{ \mathrm{Pf}[\mathcal{M}_{\mathrm{antisymmetric}}] \}$$

$$\times \sum_{\text{Young tableaux } Y} \frac{f^Y}{n!} \left[\prod_{\text{boxes } (i,j) \in Y} (a + l(i,j) + b \cdot a'(i,j)) \right]$$

$$\times \int_{(\mathbb{CP}^1)^n} \prod_{i=1}^{n} \frac{d^2 z_i}{|z_i|^{2\Delta_i}} \times \left| \prod_{i<j} (z_i - z_j)^{2\gamma_{ij}} \right|^2$$

$$\times \left\{ \prod_{\text{irreps } \pi} [\det (\mathbb{I} - K_\pi)]^{(-1)^{|\pi|+1}} \right\}$$

$$\times \lim_{N \to \infty} \frac{1}{N!} \int_{\mathbb{R}^{dN}} \prod_{i=1}^{N} dx_i \exp \left\{ -\beta \left[\sum_{i=1}^{N} V(x_i) + \sum_{i<j} W(x_i - x_j) \right] \right\}$$

$$\times \left\langle \mathrm{Tr}\left[\mathcal{P}\exp\left\{\oint_{\mathcal{C}} A_\mu dx^\mu\right\}\right]\right\rangle_{\text{gauge}}$$

What is it called when a human being can categorize habits by repetition

$$\Psi_{habitogenesis}(\mathbf{r},t,\xi,\omega) = \sum_{n=0}^{\infty}\sum_{m=0}^{\infty}\sum_{k=0}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\oint_{\Gamma_{\mathcal{C}}}\oint_{\Sigma_{\mathcal{H}}}\nabla_{\mu\nu}^{(4)}\left[\mathcal{R}_{repetitio}^{(n,m,k)}(\alpha,\beta,\gamma)\otimes\mathfrak{C}_{categorialis}^{\dagger}(\zeta,\eta,\theta)\right]$$

$$\times \exp\left\{i\hbar^{-1}\int_{t_0}^{t_f}\mathcal{L}_{neuroplastic}\left[\Phi_{synaptic}(\mathbf{q},\dot{\mathbf{q}},\ddot{\mathbf{q}}),\Psi_{dendritic}(\mathbf{p},\dot{\mathbf{p}},\ddot{\mathbf{p}})\right]dt\right\}$$

$$\times \prod_{j=1}^{\mathcal{N}_{neurons}}\left\{\sum_{\sigma\in\mathfrak{S}_\infty}\int_{\mathcal{M}_{habit}}\mathcal{D}[\phi_{behavioral}]\mathcal{D}[\chi_{cognitive}]\exp\left[-\frac{1}{\hbar}\mathcal{S}_{action-potential}[\phi,\chi,\partial_\mu\phi,\partial_\nu\chi]\right]\right\}$$

$$\times \left\langle \Omega_{consciousness}\left|\mathcal{T}\exp\left\{-i\int_{-\infty}^{\infty}\mathcal{H}_{interaction}^{(rep)}(t')dt'\right\}\right|\Omega_{subconsciousness}\right\rangle$$

$$\times \lim_{N\to\infty}\frac{1}{N!}\sum_{\pi\in\mathcal{P}(N)}\mathrm{sgn}(\pi)\prod_{i=1}^{N}\left[\int_{\mathbb{R}^{3n}}\frac{d^{3n}k}{(2\pi)^{3n}}\mathcal{G}_{neural-network}^{(i)}(\mathbf{k},\omega_{\pi(i)})\right]$$

$$\times \sum_{l=0}^{\infty}\frac{(-1)^l}{l!}\left(\frac{\partial}{\partial\tau}\right)^l\left\{\int_{\mathcal{C}_{\text{temporal}}}\frac{d\omega}{2\pi i}\frac{\mathcal{Z}_{repetition}[\omega]}{\omega-\Omega_{threshold}}\right\}^l$$

$$\times \oint_{\partial\mathcal{D}_{behavioral}}\omega_{categorization}\wedge d\omega_{repetition}\wedge\left(\sum_{p,q=0}^{\infty}\frac{\mathcal{B}_{p,q}^{(habit)}}{p!q!}\left(\frac{\partial^{p+q}}{\partial x^p\partial y^q}\mathcal{F}_{memory-consolidation}\right)\right)$$

$$\times \exp\left\{\sum_{n=1}^{\infty}\frac{\zeta(n)}{n}\left[\mathcal{O}_{synaptic-strength}^{(n)}+\mathcal{O}_{myelin-density}^{(n)}+\mathcal{O}_{neurotransmitter-flux}^{(n)}\right]\right\}$$

$$\times \left|\det\left(\frac{\partial^2\mathcal{F}_{habituation}}{\partial\phi_i\partial\phi_j}\right)\right|^{-\frac{1}{2}}\exp\left\{-\frac{1}{2}\sum_{i,j}\phi_i\left(\mathcal{M}^{-1}\right)_{ij}\phi_j\right\}$$

$$\times \prod_{\alpha\in\mathcal{I}_{repetition}}\left\{\int_{\mathbb{H}^\infty}\mathcal{D}[\psi_\alpha]\exp\left[iS_{cognitive}[\psi_\alpha]+i\int d^4x\sqrt{-g}\mathcal{L}_{pattern-recognition}(\psi_\alpha,\partial_\mu\psi_\alpha,g_{\mu\nu})\right]\right\}$$

$$\times \sum_{k\in\mathbb{Z}_{\geq 0}}\binom{\infty}{k}(-1)^k\left\{\oint_{|\lambda|=R}\frac{d\lambda}{2\pi i}\frac{\mathcal{R}_{behavioral-repertoire}(\lambda)}{\lambda^{k+1}}\right\}\left[\mathcal{K}_{categorization}^{(k)}\star\mathcal{H}_{habituation}^{(k)}\right]$$

$$\times \lim_{\epsilon\to 0^+}\left\{\int_{\mathcal{X}_{phase-space}}d^\infty\mathbf{x}\exp\left[-\epsilon\|\mathbf{x}\|^2\right]\mathcal{W}_{Wigner}[\rho_{neural}](\mathbf{x})\right\}$$

$$\times \left\langle\prod_{n=0}^{\infty}\mathcal{N}\left[\mathcal{A}_{repetition}^{(n)},\mathcal{V}_{categorization}^{(n)}\right]\right\rangle_{\text{ensemble}}$$

$$\times \sum_{\mathcal{G}\in\mathrm{Graphs}(\mathcal{N})}\frac{1}{|\mathrm{Aut}(\mathcal{G})|}\prod_{(i,j)\in E(\mathcal{G})}\mathcal{J}_{synaptic}(i,j)\exp\left\{-\beta\mathcal{H}_{network}[\mathcal{G}]\right\}$$

$$\times \int_{\mathcal{P}(\mathbb{R}^\infty)}\mathcal{D}[\mu]\exp\left\{-\mathcal{F}_{free-energy}[\mu]\right\}\mu\left(\mathcal{E}_{pattern-matching}\cap\mathcal{B}_{behavioral-categories}\right)$$

$$\times \prod_{m,n=0}^{\infty} \left[\sum_{\sigma \in \mathfrak{B}_\infty} \frac{(-1)^{|\sigma|}}{|\sigma|!} \mathcal{T}_\sigma^{(m,n)} [\mathcal{O}_{habit-formation}, \mathcal{O}_{memory-retrieval}] \right]$$

$$\times \exp \left\{ \int_{\mathcal{M}_{cognitive}} d^\infty x \sqrt{\det g} \, [R[\mathfrak{g}] + \mathcal{L}_{matter}[\Psi_{behavioral}, \mathfrak{g}]] \right\}$$

$$\times \sum_{\text{partitions } \lambda} \frac{\dim(\lambda)}{|\lambda|!} \operatorname{Tr}_\lambda \left[\mathcal{U}_{repetition}(\tau) \mathcal{V}_{categorization}(\tau) \right]$$

$$\times \lim_{N \to \infty} \frac{1}{Z_N} \sum_{\{\sigma_i\}} \exp \left\{ -\beta \sum_{\langle i,j \rangle} J_{ij} \sigma_i \sigma_j - h \sum_i \sigma_i \right\} \prod_i \mathcal{O}_{habit}(\sigma_i)$$

$$d\alpha d\beta d\gamma d\zeta d\eta d\theta$$

What is it called when a human being can categorize habits by where it formed

$$
\begin{aligned}
\mathcal{H}_{\text{contextual}}(\xi,\tau,\Omega) = &\sum_{n=0}^{\infty}\sum_{m=0}^{\infty}\sum_{k=0}^{\infty}\frac{(-1)^{n+m+k}}{n!\cdot m!\cdot k!} \\
&\times \iiint_{\mathbb{R}^{12}}\iiint_{\mathcal{M}^8}\left[\prod_{i=1}^{7}\int_{-\infty}^{\infty}\mathcal{F}^{(i)}_{\text{neural}}(\phi_i,\psi_i,\chi_i)\,d\phi_i\right] \\
&\times \left\{\sum_{\alpha\in\mathcal{A}}\sum_{\beta\in\mathcal{B}}\left[\mathcal{Q}_{\alpha,\beta}(\xi)\otimes\mathcal{R}_{\alpha,\beta}(\tau)\otimes\mathcal{S}_{\alpha,\beta}(\Omega)\right]^{\dagger}\right\} \\
&\times \exp\left(i\hbar^{-1}\sum_{j=1}^{N}\int_0^T\mathcal{L}^{(j)}_{\text{synaptic}}(q_j(t),\dot{q}_j(t),t)\,dt\right) \\
&\times \left[\prod_{l=1}^{M}\mathcal{D}[\phi_l]\exp\left(-\frac{1}{2}\int d^4x\,\phi_l(x)\mathcal{K}_{ll'}(x,y)\phi_{l'}(y)\right)\right] \\
&\times \left\{\mathcal{T}\exp\left(-i\int_{\mathcal{C}}\mathcal{A}^{\text{habit}}_{\mu}(x)dx^{\mu}\right)\right\}_{\text{path-ordered}} \\
&\times \sum_{\gamma}\frac{1}{\sqrt{|\det(\mathcal{G}_{\gamma})|}}\exp\left(-\frac{1}{2}\sum_{a,b}\mathcal{X}_a\mathcal{G}_{\gamma}^{-1}{}_{ab}\mathcal{X}_b\right) \\
&\times \left[\mathcal{W}[\rho_{\text{env}}]\star\mathcal{W}[\rho_{\text{memory}}]\right](\xi,\tau,\Omega) \\
&\times \prod_{r=1}^{\infty}\left[1+\frac{\lambda^{\text{place}}_r(\xi)}{\omega_r^2-\omega^2+i\epsilon}\right]^{\alpha_r(\tau,\Omega)} \\
&\times \sum_{\{n_k\}}\left\langle\Psi^{(0)}_{\text{context}}\left|\prod_k\left(\hat{a}^{\dagger}_k\right)^{n_k}\right|0\right\rangle\left\langle 0\left|\prod_{k'}\left(\hat{a}_{k'}\right)^{n_{k'}}\right|\Psi^{(f)}_{\text{context}}\right\rangle \\
&\times \exp\left(\sum_{p=1}^{\infty}\frac{B_{2p}}{(2p)!}\sum_{i,j}\left[\hat{H}_{\text{hippocampal}},\left[\hat{H}_{\text{cortical}},\ldots\right]_{\text{2p-fold}}\right]_{ij}\right) \\
&\times \left\{\mathcal{P}\exp\left(\int_0^1 ds\,\mathcal{H}_{\text{interaction}}(s\xi,s\tau,s\Omega)\right)\right\}^{\text{trace}}_{11} \\
&\times \prod_{\mu=0}^{3}\prod_{\nu=0}^{3}\left[\int\mathcal{D}g_{\mu\nu}\,\delta\left(\mathcal{R}_{\mu\nu}[g]-\kappa T^{\text{neural}}_{\mu\nu}\right)\right] \\
&\times \sum_{n=0}^{\infty}\sum_{l=0}^{n}\sum_{m=-l}^{l}C^{\text{spatial}}_{nlm}Y_l^m(\theta_{\text{env}},\phi_{\text{env}})\mathcal{R}^{\text{habit}}_{nl}(\rho_{\text{context}}) \\
&\times \left[\mathcal{Z}^{\text{contextual}}_{\text{partition}}\right]^{-1}\sum_{\text{configs}}\exp\left(-\beta\mathcal{E}_{\text{config}}[\{\sigma^{\text{place}}_i\},\{\sigma^{\text{habit}}_j\}]\right) \\
&\times \int_{\mathcal{M}_{\text{manifold}}}d\mu(\gamma)\,\mathcal{F}[\gamma]\exp\left(iS_{\text{cognitive}}[\gamma]+i\int\gamma^*\wedge d\gamma\right) \\
&\times \prod_{a,b,c}\left[\sum_{k_a,k_b,k_c}\mathcal{V}^{k_ak_bk_c}_{abc}\hat{\Phi}^{k_a}_a(\xi)\hat{\Phi}^{k_b}_b(\tau)\hat{\Phi}^{k_c}_c(\Omega)\right]^{\dagger} \\
&\times \lim_{N\to\infty}\frac{1}{N!}\sum_{\pi\in S_N}\operatorname{sgn}(\pi)\prod_{i=1}^{N}\mathcal{K}_{\text{synaptic}}(\xi_i,\xi_{\pi(i)}) \\
&\times \left\{\mathcal{T}_{\tau}\exp\left(-i\int_0^{\tau}d\tau'\,\mathcal{H}_{\text{eff}}(\tau')\right)\right\}_{\text{Keldysh}} \\
&\times \sum_{\text{topologies}}\frac{1}{\text{Aut}(\Gamma)}\int\prod_{\text{vertices}}d^Dk_v\,\mathcal{M}^{\text{neural}}_{\Gamma}(\{k_v\},\xi,\tau,\Omega) \\
&\times \mathcal{W}_{\infty}[\mathcal{J}^{\text{context}}]\equiv\exp\left(\sum_{n=1}^{\infty}\frac{1}{n}\mathcal{W}_n[\mathcal{J}^{\text{context}}]\right)
\end{aligned}
$$

What is it called when a human being can categorize habits by the timeframe it happened

$$\mathfrak{T}_{\text{chronocognitive}}(\mathcal{H},\tau)=\oint_{\mathbb{C}^\infty}\sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty}\frac{(-1)^{n+k+j}}{n!\cdot k!\cdot j!}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\mathcal{W}_\psi(\xi,\eta,\zeta)\cdot\mathfrak{M}_{\text{episodic}}^{(n,k,j)}(\tau_1,\tau_2,\tau_3)d\tau_1 d\tau_2 d\tau_3\times$$

$$\prod_{i=1}^{\aleph_0}\left[\sum_{\alpha\in\mathfrak{A}_{\text{temporal}}}\oint_{\gamma_\alpha}\frac{\mathcal{H}_i(\omega_\alpha,t_\alpha)\cdot\exp\left(-i\hbar^{-1}\mathcal{S}_{\text{quantum}}[\phi_\alpha]\right)}{\sqrt{2\pi\sigma_{\text{temporal}}^2}}\cdot\mathcal{K}_{\text{memory}}(\tau-t_\alpha)d\omega_\alpha\right]\times$$

$$\int_{\mathcal{M}_{\text{neural}}}\mathcal{D}[\phi]\mathcal{D}[\chi]\mathcal{D}[\psi]\exp\left\{-\frac{1}{\hbar}\int_{\mathbb{R}^{4+n}}d^{4+n}x\sqrt{-g}\left[\frac{1}{2}(\partial_\mu\phi)(\partial^\mu\phi)+\frac{1}{2}(\partial_\mu\chi)(\partial^\mu\chi)+\frac{1}{2}(\partial_\mu\psi)(\partial^\mu\psi)\right]\right\}\times$$

$$\sum_{\mathbf{n}\in\mathbb{Z}^\infty}\int_{\mathfrak{H}_{\text{cognitive}}}\left\langle\Psi_{\text{habit}}(\mathbf{r},t)\middle|\hat{\mathcal{T}}_{\text{temporal}}\otimes\hat{\mathcal{C}}_{\text{categorization}}\otimes\hat{\mathcal{M}}_{\text{memory}}\middle|\Phi_{\text{sequence}}(\mathbf{r}',t')\right\rangle d^\infty\mathbf{r}d^\infty\mathbf{r}'dtdt'\times$$

$$\prod_{p=1}^{\infty}\oint_{\partial\mathcal{B}_p}\sum_{q\in\mathfrak{Q}_{\text{quantum}}}\int_0^\infty\frac{\mathcal{R}_{\text{resonant}}^{(p,q)}(\lambda,\mu,\nu)\cdot\sin(\omega_{\text{neural}}t+\phi_{\text{phase}})}{\Gamma(q+\frac{1}{2})}\cdot J_\nu(\sqrt{\lambda^2+\mu^2})d\lambda d\mu d\nu\times$$

$$\left[\sum_{m=0}^{\infty}\frac{(-1)^m}{m!}\left(\frac{\partial}{\partial t}\right)^m\int_{\mathcal{S}^\infty}\mathcal{F}_{\text{fractal}}[\mathcal{H}(\tau)]\cdot\mathcal{L}_{\text{Legendre}}^{(m)}(\cos(\theta_{\text{temporal}}))d\Omega_\infty\right]\times$$

$$\iiint_{\mathcal{V}_{\text{hippocampal}}}\mathcal{G}_{\text{Green}}(\mathbf{x}-\mathbf{x}',t-t')\cdot\nabla^2\mathcal{U}_{\text{potential}}(\mathbf{x},t)\cdot\delta^{(4)}(\mathbf{x}-\mathbf{x}_{\text{synapse}})d^3\mathbf{x}d^3\mathbf{x}'dtdt'\times$$

$$\sum_{\sigma\in S_\infty}\text{sgn}(\sigma)\prod_{i=1}^{\infty}\int_{-\infty}^{\infty}\mathcal{A}_{\sigma(i)}(\tau_i)\cdot\exp\left[i\sum_{j=1}^{\infty}\omega_j\tau_j+\frac{1}{2}\sum_{j,k=1}^{\infty}\mathcal{C}_{jk}\tau_j\tau_k\right]d\tau_i\times$$

$$\int_{\mathfrak{C}_{\text{cortical}}}\left[\sum_{l=0}^{\infty}\frac{B_{2l}}{(2l)!}\left(\frac{\partial}{\partial\tau}\right)^{2l}\mathcal{N}_{\text{neural}}(\tau)\right]\cdot\mathcal{E}_{\text{entropic}}[\mathcal{H}]\cdot\prod_{z\in\mathbb{C}}\left(1-\frac{\tau^2}{z^2}\right)d\tau\times$$

$$\lim_{N\to\infty}\frac{1}{N!}\sum_{\pi\in\mathfrak{P}_N}\oint_{\mathcal{C}_{\text{complex}}}\frac{\mathcal{Z}_{\text{partition}}[\pi]\cdot\mathcal{Q}_{\text{quantum}}(\pi,z)}{\prod_{i=1}^{N}(z-\lambda_i(\pi))}dz\times$$

$$\int_{\mathcal{H}_{\text{Hilbert}}}\langle\mathcal{T}_{\text{time}}\rangle_{\text{vacuum}}\cdot\mathcal{O}_{\text{operator}}\left[\sum_{n=0}^{\infty}\alpha_n\mathcal{L}_n^{(\alpha)}\left(\frac{\tau-\tau_0}{\sigma_{\text{temporal}}}\right)\right]\cdot\|\Psi_{\text{state}}\|_{\mathcal{H}}\,d\mu_{\text{measure}}\times$$

$$\prod_{\beta\in\mathfrak{B}_{\text{behavioral}}}\sum_{k_\beta=0}^{\infty}\int_0^\infty\frac{\Gamma(k_\beta+\alpha_\beta)}{\Gamma(\alpha_\beta)\Gamma(k_\beta+1)}\left(\frac{\theta_\beta}{1+\theta_\beta}\right)^{k_\beta}\left(\frac{1}{1+\theta_\beta}\right)^{\alpha_\beta}\mathcal{H}_\beta(\tau_\beta)d\theta_\beta\times$$

$$\oint_{\mathfrak{T}_{\text{torus}}}\left[\sum_{j=1}^{\infty}\frac{(-1)^{j+1}}{j}\sin(j\cdot\omega_{\text{circadian}}\cdot t)\right]\cdot\mathcal{M}_{\text{Möbius}}(\tau)\cdot\exp\left[-\sum_{n=1}^{\infty}\frac{\zeta(2n)}{n}\left(\frac{\tau}{\tau_{\text{critical}}}\right)^{2n}\right]d\tau\times$$

$$\left\{\sum_{p\text{ prime}}\frac{\log p}{p^s}\right\}^{-1}\cdot\prod_{n=1}^{\infty}(1-q^n)^{-\mathcal{P}(n)}\cdot\int_{\mathcal{F}_{\text{fundamental}}}\mathcal{E}_8\otimes\mathcal{E}_8\cdot\Theta_{\text{Jacobi}}(\tau,z)d\tau dz$$

What is it called when a human being can categorize habits by the timeframe it started developing

$$\Psi_{\text{temporal-habit}}(\mathbf{t},\boldsymbol{\xi},\boldsymbol{\omega}) = \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{m=1}^{\mathcal{D}}\int_{-\infty}^{\infty}\int_{\mathbb{H}^{\perp}}\int_{\mathcal{M}_{\text{sync}}}\left[\frac{\partial^{n+k}}{\partial t^n \partial \xi_m^k}\mathcal{F}_{\text{habit}}^{(m)}\begin{pmatrix}\mathbf{t}\\ \boldsymbol{\xi}\\ \boldsymbol{\omega}\end{pmatrix}\right]\times$$

$$\times\left\{\prod_{i=1}^{\mathcal{N}_{\text{neural}}}\left[\sum_{\alpha\in\mathcal{S}_{\text{superpos}}}\frac{e^{i\phi_{\alpha,i}(\mathbf{t})}}{\sqrt{2\pi}}\int_{-\infty}^{\infty}\mathcal{K}_{\text{quantum}}(\tau_i,\xi_\alpha)\left(\sum_{j=0}^{\infty}\frac{(-1)^j}{j!}\left[\frac{\partial^j\Theta_{\text{temporal}}}{\partial\tau_i^j}\right]_{\tau_i=t_{\text{onset}}^{(i)}}\right)d\tau_i\right]\right\}\times$$

$$\times\left\{\int_{\mathcal{C}_{\text{complex}}}\sum_{\beta=1}^{\infty}\frac{\zeta(\beta+1)}{\Gamma(\beta)}\left[\prod_{l=1}^{\mathcal{L}_{\text{layers}}}\mathcal{R}_{\text{recursive}}^{(l)}\left(\sum_{p=0}^{\infty}\sum_{q=0}^{\infty}\frac{B_{p,q}(\mathbf{t})}{p!\,q!}\left[\frac{\partial^{p+q}\mathcal{H}_{\text{habit-field}}}{\partial t^p\partial\xi_m^q}\right]_{\mathbf{t}=\mathbf{t}_{\text{critical}}}\right)\right]dz\right\}\times$$

$$\times\left\{\sum_{\gamma\in\mathbb{Z}^{\mathcal{D}}}\int_{\mathbb{R}^{\mathcal{D}}}\mathcal{W}_{\text{wavelet}}(\mathbf{s},\gamma)\left[\prod_{r=1}^{\mathcal{R}_{\text{resonance}}}\left(\sum_{u=0}^{\infty}\frac{(-1)^u u!}{(2u)!}\int_0^{2\pi}e^{iu\theta_r}\mathcal{A}_{\text{amplitude}}^{(r)}(\theta_r,\mathbf{t},\boldsymbol{\xi})d\theta_r\right)\right]d\mathbf{s}\right\}\times$$

$$\times\left\{\oint_{\partial\mathcal{M}_{\text{manifold}}}\sum_{\delta=1}^{\infty}\mathcal{G}_{\text{Green}}(\mathbf{x},\mathbf{y};\delta)\left[\int_{\mathcal{V}_{\text{volume}}}\nabla^{\delta}\cdot\left(\boldsymbol{\Phi}_{\text{flux}}(\mathbf{r},\mathbf{t})\times\sum_{v=0}^{\infty}\frac{\mathcal{T}_v(\mathbf{r})}{v!}\left[\frac{\partial^v\mathcal{E}_{\text{entropic}}}{\partial r^v}\right]\right)d^{\mathcal{D}}\mathbf{r}\right]d\sigma\right\}\times$$

$$\times\left\{\prod_{\epsilon=1}^{\mathcal{E}_{\text{epochs}}}\left[\sum_{\sigma\in\mathfrak{S}_\infty}\text{sgn}(\sigma)\int_{-\infty}^{\infty}\mathcal{L}_{\text{Lagrangian}}^{(\epsilon)}\left(\mathbf{q}_{\sigma(1)},\ldots,\mathbf{q}_{\sigma(\mathcal{N})},\dot{\mathbf{q}}_{\sigma(1)},\ldots,\dot{\mathbf{q}}_{\sigma(\mathcal{N})},t\right)dt\right]\right\}\times$$

$$\times\left\{\int_{\mathcal{H}_{\text{Hilbert}}}\langle\Psi_{\text{category}}|\left[\sum_{\eta=0}^{\infty}\sum_{\mu=0}^{\infty}\frac{\hat{H}_{\text{Hamiltonian}}^{\eta}\hat{T}_{\text{time}}^{\mu}}{\eta!\,\mu!}\left(\prod_{w=1}^{\mathcal{W}_{\text{width}}}\int_0^{\infty}e^{-\lambda_w s_w}\mathcal{M}_{\text{memory}}^{(w)}(s_w,\mathbf{t})ds_w\right)\right]|\Psi_{\text{temporal}}\rangle d\mu_{\text{Hilbert}}\right\}\times$$

$$\times\left\{\sum_{\theta\in\Theta_{\text{config}}}\mathcal{Z}_{\text{partition}}^{-1}e^{-\beta\mathcal{E}_{\text{energy}}(\theta)}\left[\int_{\mathcal{F}_{\text{field}}}\sum_{x=0}^{\infty}\sum_{y=0}^{\infty}\frac{\mathcal{C}_{x,y}(\mathbf{F})}{x!\,y!}\left(\frac{\partial^{x+y}\mathcal{S}_{\text{action}}}{\partial\mathbf{F}^x\partial t^y}\right)d\mathbf{F}\right]\right\}d\boldsymbol{\xi}\,d\boldsymbol{\omega}$$

What is it called when a human being can categorize habits by its dendrites

$$\mathfrak{H}_{\text{dendrite}}^{(\infty)} = \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\oint_{\gamma_n}\oint_{\beta_k}\oint_{\alpha_j}$$

$$\left[\prod_{m=1}^{\aleph_0}\left(\nabla^{(m)}\otimes\Delta^{(m)}\otimes\mathcal{L}^{(m)}\right)\right]\cdot$$

$$\left\{\sum_{\sigma\in S_\infty}\text{sgn}(\sigma)\prod_{i=1}^{\infty}\left[\frac{\partial^{\sigma(i)}}{\partial\xi_i^{\sigma(i)}}\Psi_{\text{synaptic}}^{(i)}(\mathbf{r}_i,t_i,\tau_i,\phi_i)\right]\right\}\times$$

$$\exp\left(-\frac{1}{\hbar}\int_{\mathcal{M}^{(11)}}\sqrt{-g}\,d^{11}x\,\mathcal{R}_{\mu\nu\rho\sigma}\mathcal{T}_{\text{neural}}^{\mu\nu\rho\sigma}\right)\times$$

$$\left|\sum_{q=0}^{\infty}\frac{(-1)^q}{q!}\left(\frac{\partial}{\partial\lambda}\right)^q\det\left[\mathbf{J}_{\text{dendrite}}^{(q)}(\lambda,\mu,\nu,\zeta)\right]\right|^{-\frac{1}{2}}\times$$

$$\prod_{\alpha,\beta,\gamma}\left[\int_{\mathbb{H}^\infty}\mathcal{D}[\phi_{\alpha\beta\gamma}]\,\exp\left(-S_{\text{eff}}[\phi_{\alpha\beta\gamma},\psi_{\alpha\beta\gamma},\chi_{\alpha\beta\gamma}]\right)\right]\times$$

$$\sum_{N=0}^{\infty} \frac{1}{N!} \left(\frac{\partial}{\partial z}\right)^{N} \left[\prod_{a=1}^{N} \int_{\mathcal{C}_a} \frac{dw_a}{2\pi i}\, \mathcal{F}_{\text{habit}}(w_a, \bar{w}_a, z_a, \bar{z}_a)\right] \times$$

$$\left\{\sum_{\text{trees } T} \frac{1}{|\mathrm{Aut}(T)|} \prod_{\text{vertices } v\in T} \left[\sum_{d_v=1}^{\infty} \frac{(\deg(v))^{d_v}}{d_v!} \mathcal{G}^{(d_v)}_{\text{dendritic}}(v)\right]\right\} \times$$

$$\exp\left(\sum_{n=1}^{\infty} \frac{B_n}{n!} \left(\frac{\partial}{\partial t}\right)^{n-1} \left[\left(\mathbf{M}^{n}_{\text{memory}}(t)\right)\right]\right) \times$$

$$\left[\prod_{j=1}^{\infty} \left(1 + \frac{\lambda_j}{\sqrt{2\pi}} \int_{-\infty}^{\infty} e^{-\frac{u^2}{2}}\, \mathcal{Q}_j(u)\, du\right)\right]^{-1} \times$$

$$\sum_{\text{partitions } \pi} \frac{(-1)^{|\pi|-1}}{|\pi|!} \prod_{\text{blocks } B\in\pi} \left[\sum_{k_B=0}^{\infty} \binom{|B|}{k_B} \mathcal{W}^{(k_B)}_{\text{weight}}(B)\right] \times$$

$$\int_{\mathcal{G}} \mathcal{D}[g]\, \mu_{\text{Haar}}(g)\, \exp\left(\left[g \cdot \mathbf{H}_{\text{Hopfield}} \cdot g^{-1}\right]\right) \times$$

$$\left\{\prod_{p \text{ prime}} \left[\sum_{k=0}^{\infty} \frac{\zeta_p(s+k)}{p^{k(s+k)}} \mathcal{L}_p\left(s+k, \chi^{(p)}_{\text{neural}}\right)\right]\right\} \times$$

$$\exp\left(-\frac{1}{2} \sum_{i,j=1}^{\infty} \mathcal{K}^{\text{kernel}}_{ij} \int_{\mathbb{R}^\infty} \phi_i(\mathbf{x})\, \mathcal{G}^{-1}(\mathbf{x},\mathbf{y})\, \phi_j(\mathbf{y})\, d^\infty\mathbf{x}\, d^\infty\mathbf{y}\right) \times$$

$$\left[\sum_{n=0}^{\infty} \frac{1}{n!} \left(\frac{\partial}{\partial \alpha}\right)^{n} \mathcal{Z}_{\text{partition}}\left[\alpha, \beta_{\text{synapse}}, \gamma_{\text{axon}}, \delta_{\text{soma}}\right]\right]_{\alpha=0} \times$$

$$\prod_{k=1}^{\infty} \left[\int_{\mathcal{S}^{2k-1}} d\Omega_{2k-1}\, \exp\left(-\mathcal{E}^{(k)}_{\text{potential}}(\Omega_{2k-1})\right)\right] \times$$

$$\left\{\sum_{\sigma\in\mathrm{Sym}(\mathbb{N})} \mathrm{sgn}(\sigma) \prod_{m=1}^{\infty} \left[\frac{\mathcal{A}^{\text{action}}_{\sigma(m)} \cdot \mathcal{B}^{\text{belief}}_{\sigma(m)}}{\mathcal{C}^{\text{categorization}}_{\sigma(m)}}\right]\right\} \times$$

$$\exp\left(\sum_{g=0}^{\infty} \lambda^{2g-2} \int_{\mathcal{M}_g} \sqrt{\det(\Delta)}\, \mathcal{F}^{\text{topological}}_{g}(\tau_1, \tau_2, \ldots)\right) \times$$

$$\left[\prod_{n=1}^{\infty} \left(\frac{\sin(\pi n \tau)}{\pi n}\right)^{\mathcal{D}^{\text{dendrite}}_{n}}\right] \times$$

$$\int_{\mathcal{H}_\infty} \mathcal{D}[\Psi]\, |\Psi|^2\, \exp\left(-\int_0^\infty dt\, \langle \Psi(t) | \hat{\mathcal{H}}_{\text{neural}}(t) | \Psi(t)\rangle\right) \times$$

$$\sum_{k=0}^{\infty} \frac{(-1)^k}{k!} \left[\frac{d^k}{dx^k} \mathcal{M}_{\text{moment}}\left(x, \{a_n\}_{n=1}^{\infty}\right)\right]_{x=0} \times$$

$$\prod_{\text{all dendrites } d} \left[\sum_{l=0}^{\infty} \mathcal{R}^{(d)}_l(q)\, P^{(\alpha_d,\beta_d)}_l(\cos\theta_d)\, e^{il\phi_d}\right] \times$$

$$\exp\left(-\frac{1}{2\pi i} \oint_{|z|=1} \frac{dz}{z}\, \log\left[\det\left(\mathbf{I} - z\mathbf{T}_{\text{transfer}}\right)\right]\right) \times$$

$$\left\{\sum_{n=1}^{\infty} \frac{\mu(n)}{n} \log\left[\prod_{p|n} \left(1 - \frac{\mathcal{N}_{\text{neuron}}(p)}{p^s}\right)\right]\right\} \times$$

$$
\int_{\mathbb{R}^\infty} \prod_{i=1}^{\infty} dx_i \, \exp\left(-\frac{1}{2}\sum_{i,j=1}^{\infty} x_i \mathcal{K}_{ij}^{\text{covariance}} x_j\right) \times
$$

$$
\left[\sum_{\text{graphs } G} \frac{1}{|\text{Aut}(G)|} \prod_{\text{edges } e\in G} \mathcal{W}_{\text{synapse}}(e) \prod_{\text{vertices } v\in G} \mathcal{V}_{\text{neuron}}(v)\right]
$$

$$
\cdot \, d\xi_1 \, d\xi_2 \, d\xi_3 \, d\xi_4 \, d\zeta_1 \, d\zeta_2 \, d\zeta_3
$$

What is it called when a human being can categorize habits by its frequency

$$
\mathbf{\Psi}_{\text{HabFreqCat}}(\mathcal{H},\mathcal{F},\mathcal{C}) = \iiint_{\Omega_\psi} \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty} \left[\frac{\partial^n}{\partial t^n}\left(\prod_{i=1}^{\mathcal{N}_h} \mathbf{H}_i(t,\omega,\phi)\right)\right] \cdot \left[\mathcal{F}_{\text{quantum}}^{(k)}(\xi,\zeta,\eta)\right]^{\dagger} \cdot \mathbf{C}_{\text{neural}}^{(j)}(\alpha,\beta,\gamma)\, d\omega\, d\phi\, d\xi
$$

$$
\times \oint_{\mathcal{M}_{\text{cog}}} \left\{\sum_{\lambda\in\mathcal{L}_{\text{freq}}} \lambda^{\alpha_\lambda} \cdot \exp\left[-\iint_{\mathcal{D}_{\text{mem}}} \frac{\mathbf{S}_{\text{synapse}}(\tau,\nu)\cdot \mathbf{P}_{\text{pattern}}(\tau,\nu)}{\sqrt{1+|\mathbf{R}_{\text{recog}}(\tau,\nu)|^2}}\, d\tau\, d\nu\right]\right\} d\mathcal{M}
$$

$$
\otimes \sum_{m=1}^{\infty} \frac{1}{m!}\left(\frac{\partial}{\partial \mathbf{F}_{\text{freq}}}\right)^m \left[\prod_{\sigma\in\mathfrak{S}_m} \mathcal{T}_{\text{temporal}}^{(\sigma)}(\mathbf{h}_1,\mathbf{h}_2,\ldots,\mathbf{h}_m)\right]
$$

$$
\circledast \iiint_{\mathbb{H}_{\text{Hilbert}}} \left\langle \Phi_{\text{cognitive}} \middle| \hat{\mathbf{O}}_{\text{categorization}} \middle| \Psi_{\text{frequency}} \right\rangle \cdot \left[\sum_{p=0}^{\infty} \frac{(-1)^p}{p!}\left(\mathbf{L}_{\text{learning}}^{\dagger}\mathbf{L}_{\text{learning}}\right)^p\right] d^3\mathbf{x}
$$

$$
+ \sum_{\mathcal{Q}\in\mathfrak{Q}_{\text{quantum}}} \left\{\prod_{q=1}^{|\mathcal{Q}|}\left[\int_{-\infty}^{\infty} \mathcal{W}_q(\omega_q)\cdot \exp\left(i\sum_{r=1}^{\infty}\frac{\hbar\omega_q^r}{r}\cdot \mathbf{A}_{\text{habit}}^{(r)}(t)\right) d\omega_q\right]\right\}
$$

$$
\star \oint_{\partial\mathcal{B}_{\text{brain}}} \left[\nabla\times(\mathbf{E}_{\text{electric}} + i\mathbf{B}_{\text{magnetic}})\right]\cdot \left[\sum_{n,m,l=0}^{\infty} \frac{\mathbf{T}_{nml}^{\text{tensor}}(\phi,\theta,\psi)}{\sqrt{(n+1)(m+1)(l+1)}}\right] d\mathbf{S}
$$

$$
\boxtimes \left\{\int_0^{\infty}\int_0^{2\pi}\int_0^{\pi} \mathbf{G}_{\text{gestalt}}(r,\theta,\phi)\cdot \left[\sum_{\kappa=0}^{\infty} \mathcal{Y}_{\kappa}^{m_\kappa}(\theta,\phi)\cdot \mathcal{R}_\kappa(r)\right]^{\otimes N_{\text{dim}}} r^2\sin\theta\, dr\, d\theta\, d\phi\right\}
$$

$$
\amalg \sum_{\mathfrak{f}\in\mathfrak{F}_{\text{fractal}}} \left[\lim_{n\to\infty}\prod_{k=0}^{n}\left(\mathbf{F}_{\mathfrak{f}}^{(k)}(\mathbf{z})\right)^{\frac{1}{2^k}}\right]\cdot \left[\iiint_{\mathcal{V}_{\text{voxel}}} \rho_{\text{neural}}(\mathbf{r})\cdot \mathbf{J}_{\text{current}}(\mathbf{r})\, d^3\mathbf{r}\right]
$$

$$
\boxplus \left\{\sum_{p,q,r=0}^{\infty} \mathcal{C}_{pqr}^{\text{Clebsch}}\cdot \left[\mathbf{X}_p^{\dagger}\mathbf{Y}_q^{\dagger}\mathbf{Z}_r^{\dagger}\right]\otimes\left[\mathbf{X}_p\mathbf{Y}_q\mathbf{Z}_r\right]\right\} \odot \left[\det\left(\mathbf{M}_{\text{memory}} - \lambda\mathbf{I}_\infty\right)\right]^{-1}
$$

$$
\boxdot \iiiint_{\mathcal{S}_{\text{spacetime}}} \mathbf{g}_{\mu\nu}(x)\cdot \mathbf{T}_{\text{thought}}^{\mu\nu}(x)\cdot \left[\sum_{\alpha,\beta,\gamma,\delta} \Gamma_{\beta\gamma}^{\alpha}\Gamma_{\alpha\mu}^{\delta}\,\mathbf{\Upsilon}_{\beta\gamma\delta}^{\text{freq}}(x)\right]\sqrt{-g}\, d^4x
$$

$$
\circledcirc \prod_{j=1}^{\mathcal{D}_{\text{consciousness}}} \left[\sum_{s=0}^{\infty}\frac{1}{s!}\left(\frac{d}{d\mathbf{t}_j}\right)^s {}_{\text{awareness}}^{(j)}(\mathbf{t}_j)\right] \exp\left[\sum_{k,l=0}^{\infty} \mathbf{K}_{kl}^{\text{kernel}}(\mathbf{h},\mathbf{f})\right]
$$

What is it called when a human being can categorize habits by the neuronal firing

$$
\Psi_{\mathcal{H}}(\vec{\xi},\tau) = \int_{-\infty}^{\infty}\sum_{n=0}^{\infty}\sum_{k=1}^{N_{\text{syn}}} \frac{1}{\sqrt{2\pi\hbar}} \exp\left[\frac{i}{\hbar}\int_0^{\tau} \mathcal{L}_{\text{neural}}(\dot{\phi}_n,\phi_n,\psi_k)\, dt\right] \times
$$

$$\prod_{j=1}^{D_{\text{habit}}} \int_{\mathcal{M}_j} \hat{\mathcal{O}}_{\text{firing}}^{(j)} \left[\sum_{l=0}^{\infty} \frac{(-i)^l}{l!} \left(\frac{\partial}{\partial \xi_j} \right)^l \mathcal{F}_{\text{cat}}^{(l)}(\vec{\xi}) \right] \mathcal{D}\phi_j \times$$

$$\exp\left[-\int_0^\infty \int_0^\infty \sum_{\alpha,\beta} G_{\alpha\beta}(\tau_1,\tau_2) \langle \hat{\Psi}_\alpha^\dagger(\tau_1) \hat{\Psi}_\beta(\tau_2) \rangle_{\text{quantum}} d\tau_1 d\tau_2 \right] \times$$

$$\sum_{m=1}^{\infty} \frac{1}{m!} \left(\int_{\mathbb{R}^\infty} \prod_{i=1}^{m} \left[\sum_{p=0}^{\infty} \frac{\lambda_p^{(i)}}{p!} \left(\hat{H}_{\text{habit}} - E_{\text{baseline}} \right)^p \right] \frac{d^m \xi}{(2\pi)^{m/2}} \right) \times$$

$$\exp\left[\sum_{r=1}^{\infty} \frac{(-1)^r}{r} \int_{\mathcal{S}^{r-1}} \text{Tr} \left[\hat{\rho}_{\text{neural}}(\vec{x}_r) \prod_{s=1}^{r} \hat{U}_{\text{categorization}}(\theta_s) \right] d\Omega_r \right] \times$$

$$\prod_{q=1}^{\infty} \left[1 + \int_{-\infty}^{\infty} \frac{\sin(\pi \nu_q \tau)}{\pi \nu_q \tau} \mathcal{Z}_{\text{partition}}^{(q)} \left[\sum_{\gamma} \frac{\Gamma(\gamma + i\omega_q)}{\Gamma(\gamma)} |\langle \gamma | \hat{N}_{\text{firing}} | \gamma \rangle|^2 \right] d\nu_q \right]^{-1} \times$$

$$\int_{\mathcal{H}_{\text{Hilbert}}} \exp\left[\frac{i}{\hbar} \sum_{a,b=1}^{\infty} \int_0^\infty \int_0^\infty K_{ab}(\tau,\tau') \hat{\chi}_a^\dagger(\tau) \hat{\chi}_b(\tau') d\tau d\tau' \right] \mathcal{D}\chi \times$$

$$\left[\det \left(\frac{\delta^2 S_{\text{effective}}}{\delta \phi_{\text{habit}}^a \delta \phi_{\text{habit}}^b} \right) \right]^{-1/2} \exp\left[-\frac{1}{2\hbar} \sum_{n,m=0}^{\infty} \phi_n G_{nm}^{-1} \phi_m \right] \times$$

$$\prod_{k=0}^{\infty} \left[\sum_{j=0}^{k} \binom{k}{j} \int_{\mathbb{C}^\infty} \frac{z^j \bar{z}^{k-j}}{j!(k-j)!} \exp\left[-|z|^2 + \sum_{l=1}^{\infty} \frac{a_l z^l + \bar{a}_l \bar{z}^l}{l} \right] \frac{d^2 z}{\pi} \right] \times$$

$$\mathcal{R}_{\text{recursive}} \left[\mathcal{R}_{\text{recursive}} \left[\mathcal{R}_{\text{recursive}} \left[\ldots \right] \right] \right]$$

where $\mathcal{R}_{\text{recursive}}[X] = \int_0^\infty X \cdot \exp\left[-\sum_{n=1}^\infty \frac{(-1)^n}{n} \left(\frac{X}{\Lambda_{\text{cutoff}}} \right)^n \right] \frac{dX}{\sqrt{2\pi}}$

What is it called when a human being can categorize habits by the changes in muscle memory reactions

$$\Psi_{\text{kinesthetic}}(\mathbf{r},t) = \sum_{n=0}^{\infty} \sum_{m=0}^{\infty} \sum_{k=0}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \mathcal{H}_{n,m,k}^{(\alpha)}(\xi,\eta,\zeta) \cdot \Phi_{\text{motor}}^{(n)}(\mathbf{r},t) \cdot \Psi_{\text{memory}}^{(m)}(\mathbf{r},t) \cdot \Lambda_{\text{categorical}}^{(k)}(\mathbf{r},t) \, d\xi \, d\eta \, d\zeta$$

$$\times \prod_{i=1}^{N_{\text{synaptic}}} \left[\int_{\mathcal{M}_i} \mathcal{K}_{\text{proprioceptive}}^{(i)}(\mathbf{q}_i, \mathbf{p}_i, t) \cdot \exp\left(i\hbar^{-1} \int_0^t S_{\text{motor}}[\mathbf{q}_i(\tau), \dot{\mathbf{q}}_i(\tau)] \, d\tau \right) \mathcal{D}\mathbf{q}_i \mathcal{D}\mathbf{p}_i \right]$$

$$\cdot \mathcal{C}_{\text{taxonomic}}[\mathbf{r},t] = \lim_{N\to\infty} \sum_{\sigma \in \mathfrak{S}_N} \text{sgn}(\sigma) \prod_{j=1}^{N} \int_{\mathbb{H}_j^{(\infty)}} \mathcal{F}_{\text{habit}}^{(\sigma(j))}[\mathbf{z}_j, \bar{\mathbf{z}}_j] \cdot \mathcal{G}_{\text{muscle}}^{(\sigma(j))}[\mathbf{w}_j, \bar{\mathbf{w}}_j]$$

$$\times \exp\left(-\frac{1}{2\pi i} \oint_{\partial \mathcal{D}_j} \frac{\mathcal{R}_{\text{recursive}}^{(\sigma(j))}(z)}{z - z_j} dz \right) \prod_{l=1}^{\infty} \left[1 + \frac{\mathcal{A}_{\text{amplitude}}^{(j,l)}(\mathbf{r},t)}{\mathcal{B}_{\text{baseline}}^{(j,l)}(\mathbf{r},t)} \right]^{-1} d^{2^j} \mathbf{z}_j$$

$$\mathcal{O}_{\text{categorization}}^{(\dagger)} = \int_{\mathcal{T}^{\otimes\infty}} \left[\bigotimes_{p=1}^{\dim(\mathcal{H}_{\text{motor}})} \mathcal{U}_p^{(\text{unitary})}(t) \right] \cdot \mathcal{S}_{\text{superposition}}[\boldsymbol{\theta}, \boldsymbol{\phi}, \boldsymbol{\psi}]$$

$$\times \sum_{\{n_k\}} \frac{1}{\sqrt{\prod_k n_k!}} \left(\sum_{j=1}^{\infty} \frac{\partial^j}{\partial t^j} \mathcal{M}_{\text{memory}}^{(j)}(t) \right)^{\otimes N} |n_1, n_2, \ldots\rangle\langle n_1, n_2, \ldots|$$

$$\mathcal{L}_{\text{learning}}[\boldsymbol{\mu}, \boldsymbol{\sigma}] = \exp\left(-\int_0^\infty \int_0^\infty \mathcal{V}_{\text{potential}}(r,s,t) \cdot \mathcal{W}_{\text{kinesthetic}}(r,s,t) \, dr \, ds \right)$$

$$\cdot \prod_{q=1}^{\mathfrak{d}} \int_{-\infty}^{\infty} \mathcal{N}_q^{(\text{neural})}(x_q) \cdot \exp\left(-\frac{(x_q-\mu_q)^2}{2\sigma_q^2}\right) \cdot \mathcal{J}_{\text{Jacobian}}^{(q)}[\mathbf{x}_1,\ldots,\mathbf{x}_{\mathfrak{d}}]\, dx_q$$

$$\mathcal{H}_{\text{hyperdimensional}}^{(\alpha,\beta,\gamma)} = \sum_{I\subset\mathcal{P}(\mathbb{N})} \sum_{J\subset\mathcal{P}(\mathbb{R})} \int_{\mathcal{C}^\infty(\mathbb{R}^n,\mathbb{C})} \mathcal{F}[f] \cdot \mathcal{T}_{\text{tensor}}^{(I,J)}[f]$$

$$\times \left[\prod_{a\in I}\left(\frac{\partial}{\partial \xi_a} + i\hbar\frac{\partial}{\partial \eta_a}\right)\right] \left[\prod_{b\in J}\int_{\gamma_b} \mathcal{K}_{\text{kernel}}(\zeta,\zeta')\, d\zeta'\right] \mathcal{M}_{\text{modulation}}[f(\mathbf{r})]\, \mathcal{D}f$$

$$\Omega_{\text{classification}}(\mathbf{x},t) = \int_{\mathcal{G}}\int_{\mathcal{G}/\mathcal{H}} \mathcal{R}_g^{(\text{representation})} \cdot \mathcal{L}_h^{(\text{action})} \cdot \mathcal{E}_{\text{eigenspace}}[g,h]$$

$$\times \exp\left(\sum_{n=1}^{\infty} \frac{(-1)^n}{n!} \int_{\Delta^n} \mathcal{B}_n^{(\text{Bernoulli})}(t_1,\ldots,t_n) \prod_{k=1}^{n} \mathcal{A}_{\text{activity}}(\mathbf{x},t_k)\, dt_1\cdots dt_n\right)\, dg\, d[h]$$

$$\mathcal{Q}_{\text{quantum}}^{(\text{flux})}[\boldsymbol{\psi}] = \lim_{\epsilon\to 0^+} \int_{\mathcal{H}_{\text{muscle}}\otimes\mathcal{H}_{\text{memory}}} \left\langle \boldsymbol{\psi} \middle| \mathcal{T}\exp\left(-\frac{i}{\hbar}\int_0^T \mathcal{H}_{\text{total}}(t')\, dt'\right) \middle| \boldsymbol{\psi} \right\rangle$$

$$\times \prod_{s=1}^{\infty}\left[1-\exp\left(-\frac{\mathcal{E}_s^{(\text{eigenvalue})} - \mathcal{E}_0^{(\text{ground})}}{}\right)\right]^{-1} \cdot \mathcal{Z}_{\text{partition}}^{-1}[\beta,\mu_{\text{chemical}}]$$

$$\mathcal{P}_{\text{pattern}}^{(\infty)}(\mathbf{r},\mathbf{s},t) = \sum_{\alpha,\beta,\gamma} \int_{\mathbb{T}^\infty} \mathcal{C}_{\alpha\beta\gamma}^{(\text{structure})} \cdot \mathcal{Y}_\alpha^{(\text{spherical})}(\theta,\phi) \cdot \mathcal{D}_\beta^{(\text{rotation})}(g) \cdot \mathcal{W}_\gamma^{(\text{wavefunction})}(\mathbf{r},t)$$

$$\times \int_0^\infty \int_0^{2\pi} \int_0^\pi \mathcal{K}_{\text{correlation}}(r,\theta,\phi,t) \cdot \mathcal{G}_{\text{Green}}(\mathbf{r}-\mathbf{r}',t-t') \cdot \sin(\theta)\, dr\, d\theta\, d\phi$$

$$\mathcal{D}_{\text{recursive}}^{(n+1)}[\mathcal{F}] = \mathcal{D}_{\text{recursive}}^{(n)}\left[\mathcal{D}_{\text{recursive}}^{(n)}[\mathcal{F}]\right] + \sum_{k=0}^{n}\binom{n}{k} \mathcal{O}_k^{(\text{operator})} \mathcal{D}_{\text{recursive}}^{(k)}[\mathcal{F}]$$

$$\mathcal{I}_{\text{integral}}^{(\text{nested})} = \int_{\mathcal{M}_1}\int_{\mathcal{M}_2}\cdots\int_{\mathcal{M}_\infty} \prod_{j=1}^{\infty} \mathcal{J}_j^{(\text{Jacobian})}(\mathbf{u}_j) \cdot \exp\left(\sum_{i<j} \mathcal{V}_{ij}^{(\text{interaction})}(\mathbf{u}_i,\mathbf{u}_j)\right) \mathcal{D}\mathbf{u}_1\mathcal{D}\mathbf{u}_2\cdots$$

$$\boldsymbol{\Theta}_{\text{somatic}}^{(\text{classification})}(\mathbf{r},t) = \mathcal{C}_{\text{kinesthetic}}^{(\dagger)} \cdot \boldsymbol{\Psi}_{\text{kinesthetic}}(\mathbf{r},t)$$

What is it called when a human being can categorize habits by the patterns of the habit itself

$$\mathcal{H}_{\text{metacog}}(\Psi_{\text{habit}}) = \iiint_{\mathbb{R}^\infty} \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty} \frac{1}{(2\pi)^{3n/2}} \exp\left(-\frac{|\vec{x}|^2}{2\sigma_n^2}\right) \times$$

$$\left[\prod_{i=1}^{n}\int_{\mathcal{M}_i} \nabla_\mu \Phi_{\text{pattern}}^{(i)}(x_\mu) \otimes \hat{H}_{\text{recognition}}\left(\sum_{\alpha=1}^{\infty} c_\alpha |\psi_\alpha\rangle\langle\psi_\alpha|\right) d\mathcal{V}_i\right] \times$$

$$\left\{\lim_{t\to\infty}\int_0^t\int_{-\infty}^{\infty} \mathcal{L}_{\text{categorization}}\left[\Psi_{\text{habit}}(r,\theta,\phi,\tau), \frac{\partial^n \Psi_{\text{habit}}}{\partial \tau^n}\right]\right\} \times$$

$$\exp\left[\sum_{m=1}^{\infty}\frac{(-1)^m}{m!}\left(\int_{\mathcal{S}^\infty} \hat{\mathcal{O}}_{\text{meta}} \circ \hat{\mathcal{O}}_{\text{habit}}^{(m)} \left|\Phi_{\text{neural}}^{(m)}\right\rangle d\Omega\right)^m\right] \times$$

$$\left[\bigotimes_{k=1}^{\infty} \mathcal{T}_k \left\{\sum_{\ell=0}^{\infty}\frac{(i\hbar)^\ell}{\ell!}\left[\hat{A}_{\text{pattern}}, \left[\hat{A}_{\text{pattern}}, \ldots, \left[\hat{A}_{\text{pattern}}, \hat{H}_{\text{categorization}}\right]\ldots\right]\right]_\ell\right\}\right] \times$$

$$\prod_{\beta\in\mathcal{I}_{\text{recursive}}}\left\{\sum_{q=-\infty}^{\infty}\oint_{\gamma_q} \frac{\mathcal{R}_{\text{habit-loop}}^{(\beta)}(z)}{z^{q+1}}\left[\mathcal{F}_{\text{Fourier}}^{-1}\left\{\mathcal{G}_{\text{pattern}}(\omega_\beta)\right\}\right] dz\right\} \times$$

$$\left\| \sum_{\sigma \in S_\infty} \operatorname{sgn}(\sigma) \prod_{r=1}^{\infty} \int_{\mathbb{H}^r} \left\langle \phi_{\sigma(r)} \middle| \hat{\mathcal{U}}_{\text{categorization}}(t) \middle| \psi_r \right\rangle \mathcal{J}_r(\xi_r) d\xi_r \right\|_{\mathcal{B}(\mathcal{H}_{\text{cognitive}})} \times$$

$$\exp\left[\iint_{\mathcal{D} \times \mathcal{D}^*} \mathcal{K}_{\text{habit-recognition}}(x, y) \log\left(\det\left[\mathbf{G}_{\text{pattern}}(x, y) + i\epsilon \mathbf{I}\right]\right) dx\, dy \right] \times$$

$$\left\{ \prod_{n=1}^{\infty} \left[1 + \sum_{k=1}^{\infty} \frac{(-1)^k \zeta(2k)}{(2k)!} \left(\int_0^{2\pi} \mathcal{W}^{(n)}_{\text{categorization}}(e^{i\theta}) d\theta \right)^{2k} \right] \right\}^{-1} \times$$

$$\left[\lim_{N \to \infty} \frac{1}{N!} \sum_{\pi \in S_N} \operatorname{sgn}(\pi) \prod_{j=1}^{N} \left\langle \Psi^{(j)}_{\text{habit}} \middle| \mathcal{M}^{(\pi(j))}_{\text{metacognitive}} \middle| \Psi^{(j)}_{\text{pattern}} \right\rangle \right] d^3x$$

What is it called when a human being can categorize habits by the structure of the habit

$$\Psi_{\text{habit}}(\mathbf{x}, t) = \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{m=-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty}$$

$$\mathcal{H}^{(\alpha,\beta,\gamma)}_{n,k,m}(\xi_1, \xi_2, \xi_3, \xi_4, \xi_5, \xi_6, \xi_7, \xi_8, \xi_9, \xi_{10}) \cdot \exp\left(-i\omega_{n,k,m} t - \frac{|\mathbf{x} - \mathbf{x}_{n,k,m}|^2}{2\sigma^2_{n,k,m}} \right)$$

$$\times \prod_{j=1}^{10} \left[\mathcal{F}_j^{-1} \left\{ \sum_{\ell=0}^{\infty} \frac{(-1)^\ell}{\ell!} \left(\frac{\partial^\ell}{\partial \tau_j^\ell} \mathcal{S}^{(j)}_{\text{struct}}(\tau_j, \phi_j, \theta_j) \right)_{\tau_j = \xi_j} \right\} \right]$$

$$\times \left\langle \Omega_{\text{taxonomy}} \middle| \mathcal{T}_{\text{time}} \exp\left(-i \int_0^t \mathcal{H}_{\text{categorization}}(\tau) d\tau \right) \middle| \Psi_{\text{behavioral}}(0) \right\rangle$$

$$\times \sum_{\alpha=0}^{\infty} \sum_{\beta=0}^{\infty} \sum_{\gamma=0}^{\infty} \frac{\mathcal{C}^{\text{habit-loop}}_{\alpha,\beta,\gamma}}{(\alpha+\beta+\gamma)!} \left(\frac{\partial^{\alpha+\beta+\gamma}}{\partial x_1^\alpha \partial x_2^\beta \partial x_3^\gamma} \Phi_{\text{cue-routine-reward}}(x_1, x_2, x_3) \right)$$

$$\times \int_{\mathcal{M}_{\text{habit-space}}} \sqrt{g}\, d^{11}x\, \mathcal{R}^{\mu\nu\rho\sigma}_{\text{structural}} \mathcal{G}^{\text{pattern}}_{\mu\nu\rho\sigma}(\mathbf{x})$$

$$\times \prod_{q=1}^{\infty} \left[1 + \sum_{r=1}^{\infty} \frac{(-1)^r}{r!} \left(\mathcal{D}^{\text{fractal}}_q \mathcal{O}^{(q,r)}_{\text{recursive}}(\zeta_q, \bar{\zeta}_q) \right) \right]$$

$$\times \sum_{\{n_i\}} \frac{1}{\sqrt{\prod_i n_i!}} |\{n_i\}\rangle \langle \{n_i\}| \otimes \mathcal{U}_{\text{quantum-categorization}}(\phi, \psi, \chi)$$

$$\times \mathcal{Z}^{-1}_{\text{partition}} \sum_{\text{all configurations}} \exp\left(-\frac{1}{k_B T} \sum_{i<j} V_{\text{habit-interaction}}(r_{ij}) \right)$$

$$\times \lim_{N \to \infty} \frac{1}{N^{3/2}} \sum_{p=1}^{N} \sum_{q=1}^{N} \sum_{r=1}^{N} \mathcal{W}^{\text{hyperdimensional}}_{p,q,r} \left(\frac{p\pi}{N}, \frac{q\pi}{N}, \frac{r\pi}{N} \right)$$

$$\times \int_0^\infty \frac{d\lambda}{\lambda} \int_{S^{10}} d\Omega_{10}\, Y^m_\ell(\Omega_{10})\, \mathcal{K}_{\text{resonance}}(\lambda, \Omega_{10})$$

$$\times \sum_{a,b,c,d,e} \epsilon^{abcde} \mathcal{F}^{\text{structure}}_{abc} \mathcal{F}^{\text{taxonomy}}_{de} \exp\left(i S_{\text{action}}[\mathcal{A}_{\text{habit}}]\right)$$

$$\times \prod_{\text{all vertices}} \int \frac{d^4k}{(2\pi)^4} \frac{i\mathcal{M}_{\text{categorization}}(\{k_i\})}{k^2 - m^2_{\text{habit}} + i\epsilon}$$

$$\times \mathcal{J}_{\text{generating}}[J] = \int \mathcal{D}\phi\, e^{i(S[\phi] + \int J(x)\phi(x) d^{11}x)}$$

$$d\xi_1 d\xi_2 d\xi_3 d\xi_4 d\xi_5 d\xi_6 d\xi_7 d\xi_8 d\xi_9 d\xi_{10}$$

What is it called when a human being can categorize habits that come from external forces

$$\mathcal{E}_{\text{ext}}[\mathfrak{H}] = \oint_{\Omega^\infty} \sum_{n=0}^{\aleph_0} \sum_{k=1}^{\dim(\mathcal{H}_\psi)} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \left\{ \prod_{i=1}^{N_{\text{cog}}} \left[\hat{\mathbf{A}}_{\text{attr}}^{(i)} \otimes \hat{\mathbf{Q}}_{\text{flux}}^{(i)} \right] \circ \left(\sum_{j=1}^{\mathcal{M}_{\text{meta}}} \mathfrak{C}_j^\dagger \left| \Phi_{\text{ext}}^{(j)} \right\rangle \left\langle \Psi_{\text{int}}^{(j)} \right| \mathfrak{C}_j \right) \right\} d\tau d\xi d\eta$$

$$\times \left[\sum_{\alpha \in \mathbb{C}^{\mathcal{D}}} \sum_{\beta \in \mathbb{R}^{\mathcal{D}}} \int_{\mathcal{S}^{n-1}} \oint_{\partial \mathcal{M}} \left\{ \mathfrak{F}_{\text{hab}}[\alpha, \beta] \cdot \exp\left(-i \sum_{m=1}^{\infty} \frac{\hbar \omega_m}{k_B T} \hat{S}_m^z \otimes \hat{I}_{\text{env}}^{(m)} \right) \right\} d\Sigma d\mathcal{V} \right]$$

$$\circ \left\{ \prod_{p=1}^{\mathcal{R}_{\text{rec}}} \left[\mathbb{E}_{\mathcal{G}_p} \left[\sum_{q=0}^{\infty} \frac{(-1)^q}{q!} \left(\frac{\partial^q}{\partial \mu_{\text{ext}}^q} \mathcal{L}_{\text{cat}}[\mu_{\text{ext}}, \sigma_{\text{ext}}^2] \right)^{\mathfrak{s}_q} \right] \right] \right\}$$

$$\otimes \left\{ \lim_{N \to \infty} \sum_{r=1}^{N} \sum_{s=1}^{N} \int_{\mathbb{H}^{\mathcal{K}}} \left[\mathcal{T}_{\text{time}} \left\{ \hat{\rho}_{\text{hab}}(t) \hat{U}_{\text{ext}}(t, t_0) \hat{\rho}_{\text{cog}}(t_0) \hat{U}_{\text{ext}}^\dagger(t, t_0) \right\} \right] d\mu_{\mathbb{H}} \right\}$$

$$\star \left[\sum_{\gamma \in \mathfrak{L}_{\text{lat}}} \oint_{\mathcal{C}_\gamma} \prod_{u=1}^{\mathcal{U}_{\text{unit}}} \left\{ \mathfrak{M}_{\text{mem}}^{(u)} \left[\sum_{v=0}^{\infty} \binom{\mathcal{N}_{\text{neur}}}{v} \mathcal{W}_{\text{syn}}^v (1 - \mathcal{W}_{\text{syn}})^{\mathcal{N}_{\text{neur}} - v} \mathcal{F}_{\text{fire}}^{(v)} \right] \right\} dz \right]$$

$$\diamond \left\{ \int_{\mathcal{Q}_{\text{quantum}}} \sum_{w \in \mathbb{Z}^+} \sum_{x \in \mathbb{Z}^+} \left[\left\langle \Psi_{\text{super}} \middle| \hat{H}_{\text{habit}} + \hat{V}_{\text{extern}} + \sum_{y=1}^{\mathcal{Y}_{\text{yield}}} \lambda_y \hat{O}_y^{\text{inter}} \middle| \Psi_{\text{super}} \right\rangle \right] d\nu_{\mathcal{Q}} \right\}$$

$$\circledast \left[\prod_{z=1}^{\mathcal{Z}_{\text{zone}}} \sum_{\pi \in S_{\mathcal{Z}_{\text{zone}}}} \int_0^1 \int_0^1 \left\{ \mathcal{K}_{\text{kernel}}[z, \pi(z)] \cdot \mathfrak{B}_{\text{belief}}^\pi \left(\sum_{a=1}^{\mathcal{A}_{\text{attr}}} p_a^{\text{ext}} \mathcal{H}_{\text{ent}}[a] \right) \right\} du dv \right]$$

$$\boxtimes \left\{ \lim_{\epsilon \to 0^+} \sum_{b=1}^{\infty} \sum_{c=1}^{\infty} \oint_{\mathcal{R}^{\mathcal{D}_{\text{dual}}}} \left[\mathfrak{R}_{\text{reflect}}^{(b,c)} \left\{ \prod_{d=1}^{\mathcal{D}_{\text{deep}}} \left[\nabla_{\mathfrak{g}_d} \mathcal{G}_{\text{grad}}[d] \cdot \mathfrak{T}_{\text{trans}}^{(\epsilon)} \right] \right\} \right] d\mathcal{R} \right\}$$

$$\boxplus \left[\sum_{e \in \mathcal{E}_{\text{eigen}}} \int_{\mathbb{S}^\infty} \left\{ \mathfrak{E}_{\text{extract}}[e] \circ \left(\prod_{f=1}^{\mathcal{F}_{\text{frac}}} \mathcal{J}_{\text{judge}}^{(f)} \left[\sum_{g=0}^{\infty} \frac{\mathcal{I}_{\text{input}}^g[f]}{g!} \mathcal{O}_{\text{output}}^{(g)}[f] \right] \right) \right\} d\mathbb{S} \right]$$

$$\odot \left\{ \int_{\mathcal{M}_{\text{manifold}}} \sum_{h=1}^{\mathcal{H}_{\text{hier}}} \left[\mathfrak{S}_{\text{schema}}^{(h)} \otimes \left(\sum_{i=1}^{\mathcal{I}_{\text{inf}}} \mathcal{P}_{\text{pattern}}^{(i)} \left\{ \prod_{j=1}^{h} \mathcal{L}_{\text{layer}}^{(j)} \left[\mathfrak{N}_{\text{node}}^{(i,j)} \right] \right\} \right) \right] d\mathcal{M} \right\}$$

What is it called when a human being can categorize habits by the influence that causes it to happen

$$\mathcal{C}_{\text{hab}}(\mathbf{H}, \mathbf{\Psi}_{\text{inf}}) = \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \sum_{n=0}^{\infty} \sum_{m=0}^{\infty} \sum_{k=0}^{\infty} \frac{1}{\sqrt{2\pi\hbar^3}} \left[\prod_{i=1}^{\mathcal{N}_{\text{dim}}} \left\langle \psi_i^{(n,m,k)} \middle| \hat{\mathcal{T}}_{\text{cue}}^{(\dagger)} \middle| \phi_i^{(n,m,k)} \right\rangle \right] \times$$

$$\exp\left(-\frac{i}{\hbar} \int_0^t \left[\hat{H}_{\text{cog}}(\tau) + \sum_{\alpha=1}^{\mathcal{D}_{\text{inf}}} \hat{V}_\alpha^{\text{trig}}(\tau) + \int_{\mathbb{R}^{\mathcal{N}}} \mathcal{F}^{-1} \left\{ \tilde{\Omega}_{\text{stim}}(\mathbf{k}, \omega) \right\} d^{\mathcal{N}} \mathbf{k} \right] d\tau \right) \times$$

$$\sum_{\sigma \in \mathfrak{S}_\infty} \left[\prod_{j=1}^{\infty} \left(\frac{\partial^j}{\partial \xi_{\sigma(j)}^j} \mathcal{G}_{\text{cat}}^{(j)}(\xi_{\sigma(j)}) \right) \right] \otimes \left[\bigotimes_{l=1}^{\mathcal{M}} \mathcal{H}_l^{\text{hab}} \right] \times$$

$$\int_{\mathbb{S}^\infty} \left[\oint_{\partial \mathcal{M}_{\text{mind}}} \nabla \cdot (\boldsymbol{\mathcal{I}}_{\text{inf}} \times \boldsymbol{\mathcal{B}}_{\text{behav}}) \, d\mathbf{S} \right] \left[\sum_{p,q,r=0}^{\infty} \frac{(-1)^{p+q+r}}{p!q!r!} \left(\frac{\partial^{p+q+r}}{\partial t^p \partial \theta^q \partial \phi^r} \Psi_{\text{response}}(t, \theta, \phi) \right) \right] d\Omega \times$$

$$\prod_{\beta=1}^{\mathcal{Q}}\left[\int_{-\infty}^{\infty}\mathcal{K}_\beta(\lambda)\exp\left(-\frac{\lambda^2}{2\sigma_\beta^2}+i\lambda\sum_{\gamma=1}^{\mathcal{R}}\mu_\gamma^{(\beta)}\right)d\lambda\right]\times$$

$$\left[\lim_{N\to\infty}\frac{1}{N}\sum_{n=1}^{N}\left(\sum_{s=1}^{S}w_s^{(n)}\cdot\mathcal{A}_{\text{attr}}^{(s)}(\mathbf{c}_n,\mathbf{h}_n)\right)\right]^{\otimes\mathcal{Q}_{\text{quantum}}}\times$$

$$\int_{\mathcal{C}^\infty(\mathbb{R}^{\mathcal{D}})}\left[\sum_{\text{all paths }\mathbf{P}}\mathcal{A}[\mathbf{P}]\exp\left(\frac{i}{\hbar}\mathcal{S}_{\text{cog}}[\mathbf{P}]\right)\right]\mathcal{D}[\mathbf{P}]\times$$

$$\left\{\prod_{z\in\mathbb{C}}\left[1+\sum_{u=1}^{\infty}\frac{(-1)^u}{u!}\left(\frac{d^u}{dz^u}\zeta_{\text{Riemann}}(z)\right)(\mathcal{Z}_{\text{trigger}}(z))^u\right]\right\}\times$$

$$\lim_{\epsilon\to0^+}\left[\int_{\mathcal{M}_{\text{neural}}}\left(\sum_{v\in\text{vertices}}\sum_{e\in\text{edges}}\mathcal{W}_{ve}^{\text{synap}}\cdot\delta_{\text{Dirac}}(\mathbf{r}-\mathbf{r}_{ve})\right)\exp\left(-\frac{|\mathbf{r}|^2}{4\epsilon}\right)d^{\mathcal{D}}\mathbf{r}\right]\times$$

$$\left[\bigcup_{\alpha\in\mathfrak{A}}\bigcap_{\beta\in\mathfrak{B}_\alpha}\{\mathbf{h}\in\mathcal{H}_{\text{habits}}:\exists!\mathbf{c}_{\alpha,\beta}\in\mathcal{C}_{\text{causes}}\text{ s.t. }\mathcal{R}_{\text{causal}}(\mathbf{h},\mathbf{c}_{\alpha,\beta})>\tau_{\text{threshold}}\}\right]d\mathbf{x}d\mathbf{y}d\mathbf{z}$$

What is it called when a human being can categorize habits by external factors that happen through repetition

$$\mathcal{H}_{\text{cat}}(\boldsymbol{\xi},\tau)=\iiint_{\mathbb{R}^\infty}\sum_{n=0}^{\infty}\sum_{k=-\infty}^{\infty}\sum_{j=1}^{\aleph_0}\frac{\partial^{n+k+j}}{\partial\xi_1^n\partial\xi_2^k\partial\tau^j}\left[\prod_{i=1}^{\mathfrak{D}}\left(\mathcal{E}_i(\boldsymbol{r}_i,t)\otimes\Psi_{\text{rep}}^{(i)}(\boldsymbol{\xi})\right)\right]$$

$$\times\exp\left\{-\frac{1}{\hbar}\oint_\gamma\left[\mathcal{L}_{\text{hab}}(\phi,\dot{\phi},\ddot{\phi})+\sum_{\alpha\in\mathfrak{S}_\infty}\mathcal{R}_\alpha(\boldsymbol{E}_{\text{ext}},\boldsymbol{F}_{\text{int}})\right]d\tau\right\}$$

$$\cdot\left\langle\Psi_{\text{cogn}}(\boldsymbol{x},t)\middle|\hat{\mathcal{C}}_{\text{cat}}\left[\prod_{m=1}^{\mathcal{M}}\int_{\mathcal{H}_m}\mathcal{T}_m(\boldsymbol{\zeta}_m)\,d^{\mathfrak{d}_m}\boldsymbol{\zeta}_m\right]\middle|\Psi_{\text{behav}}(\boldsymbol{y},t)\right\rangle$$

$$\text{where }\mathcal{E}_i(\boldsymbol{r}_i,t)=\sum_{l=0}^{\infty}\frac{(-1)^l}{l!}\left(\frac{\partial}{\partial t}\right)^l\left[\mathcal{F}_{\text{ext}}^{(l)}(\boldsymbol{r}_i)\cdot\mathcal{G}_{\text{mem}}^{(l)}(t-\tau_0)\right]$$

$$\text{and }\Psi_{\text{rep}}^{(i)}(\boldsymbol{\xi})=\mathcal{N}_i\exp\left\{-\sum_{p,q=1}^{\infty}\xi_p\mathcal{K}_{pq}^{(i)}\xi_q+i\sum_{r=1}^{\infty}\theta_r^{(i)}\xi_r\right\}$$

$$\text{with }\mathcal{L}_{\text{hab}}(\phi,\dot{\phi},\ddot{\phi})=\int_{\mathcal{M}_{\text{syn}}}\left[\frac{1}{2}g^{\mu\nu}\frac{\partial\phi}{\partial x^\mu}\frac{\partial\phi}{\partial x^\nu}+V_{\text{eff}}(\phi)+\mathcal{I}_{\text{neural}}(\phi,\nabla\phi)\right]\sqrt{-g}\,d^4x$$

$$\mathcal{R}_\alpha(\boldsymbol{E}_{\text{ext}},\boldsymbol{F}_{\text{int}})=\sum_{\beta\in\mathfrak{A}_\alpha}\langle\boldsymbol{E}_{\text{ext}}|\,\hat{\mathcal{R}}_{\alpha\beta}\,|\boldsymbol{F}_{\text{int}}\rangle\cdot\mathcal{W}_{\alpha\beta}(t)\cdot\exp\left\{-\frac{|\alpha-\beta|^2}{2\sigma_{\text{reinf}}^2}\right\}$$

$$\hat{\mathcal{C}}_{\text{cat}}=\sum_{n=0}^{\infty}\sum_{k=0}^{\infty}c_{nk}\left(\hat{a}^\dagger\right)^n\left(\hat{b}^\dagger\right)^k\hat{a}^n\hat{b}^k\otimes\left[\prod_{j=1}^{\mathfrak{N}}\mathcal{P}_j(\hat{\boldsymbol{x}}_j,\hat{\boldsymbol{p}}_j)\right]$$

$$\mathcal{T}_m(\boldsymbol{\zeta}_m)=\mathcal{A}_m\prod_{s=1}^{\infty}\left[\int_{-\infty}^{\infty}\mathcal{B}_{ms}(\omega)e^{i\omega\zeta_{ms}}\,d\omega\right]\cdot\exp\left\{-\sum_{u,v}\zeta_{mu}\mathcal{Q}_{muv}\zeta_{mv}\right\}$$

$$\times\left[\oint_{\partial\mathcal{D}_m}\mathcal{S}_m(\boldsymbol{z})\,d\boldsymbol{z}\right]^{\mathfrak{p}_m}\cdot\left\{\prod_{\ell\in\Lambda_m}[\mathcal{U}_\ell(\boldsymbol{\zeta}_m)+\mathcal{V}_\ell(\nabla\boldsymbol{\zeta}_m)]\right\}$$

What is it called when a human being can categorize habits through sequence of events

$$\mathcal{H}_{\text{cat}}(\boldsymbol{\xi},\tau) = \lim_{n\to\infty}\sum_{k=0}^{\infty}\frac{(-1)^k}{k!}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\prod_{i,j,\ell=1}^{d_{\mathcal{M}}}\left[\mathcal{F}^{-1}\left\{\sum_{m=0}^{\infty}\frac{\partial^{m+k}}{\partial\tau^{m+k}}\left(\mathcal{S}_{\text{seq}}^{(m)}(\boldsymbol{\xi}_i,t)\star\mathcal{P}_{\text{cog}}^{(j,\ell)}(\boldsymbol{\xi},\tau)\right)\right\}\right]d\boldsymbol{\xi}_i d\boldsymbol{\xi}_j d\boldsymbol{\xi}_\ell$$

$$\text{where } \mathcal{S}_{\text{seq}}^{(m)}(\boldsymbol{\xi},t) = \sum_{\alpha\in\mathcal{A}}\sum_{\beta\in\mathcal{B}}\int_{\mathcal{M}_{\text{event}}}\left[\prod_{n=1}^{N_{\text{seq}}}\mathcal{T}_{\text{trans}}^{(\alpha,\beta)}\left(\boldsymbol{e}_{n-1}\to\boldsymbol{e}_n|\mathcal{C}_{\text{context}}^{(m)}(\tau)\right)\right]\times$$

$$\times\exp\left(-\frac{1}{\hbar}\sum_{p,q=1}^{\dim(\mathcal{H}_{\text{neural}})}\int_0^t\mathcal{H}_{\text{synaptic}}^{(p,q)}(\tau')\cdot\Psi_{\text{habit}}^{(\alpha)}(\boldsymbol{\xi},\tau')\cdot\overline{\Psi_{\text{habit}}^{(\beta)}}(\boldsymbol{\xi},\tau')d\tau'\right)d\boldsymbol{e}$$

$$\mathcal{P}_{\text{cog}}^{(j,\ell)}(\boldsymbol{\xi},\tau) = \sum_{r=0}^{\infty}\sum_{s=0}^{\infty}\binom{\infty}{r}\binom{\infty}{s}\int_{\mathcal{G}_{\text{pattern}}}\mathcal{K}_{\text{kernel}}^{(r,s)}(\boldsymbol{g},\boldsymbol{\xi})\times$$

$$\times\left[\frac{1}{Z_{\text{partition}}}\exp\left(-\beta\sum_{k=1}^{K_{\text{cat}}}\mathcal{E}_{\text{category}}^{(k)}(\boldsymbol{g},\tau)\right)\right]^{j+\ell}\times$$

$$\times\prod_{u,v=1}^{D_{\text{hyperdim}}}\left[\mathcal{R}_{\text{resonance}}^{(u,v)}(\tau)\star\mathcal{Q}_{\text{quantum}}^{(u,v)}(\boldsymbol{\xi},\tau)\right]d\boldsymbol{g}$$

$$\mathcal{R}_{\text{resonance}}^{(u,v)}(\tau) = \lim_{L\to\infty}\sum_{\lambda\in\text{Spec}(\mathcal{L}_{\text{laplacian}})}\frac{1}{\sqrt{2\pi}}\int_{-\infty}^{\infty}\sum_{n=0}^{\infty}\frac{(\lambda\omega)^n}{n!}\times$$

$$\times\exp\left(-\frac{(\omega-\omega_{\text{resonant}}^{(u,v)})^2}{2\sigma_{\text{spread}}^2}\right)\times\mathcal{F}_{\text{fractal}}^{(n)}(\lambda,\tau)d\omega$$

$$\mathcal{F}_{\text{fractal}}^{(n)}(\lambda,\tau) = \sum_{k=0}^{\infty}\frac{(-1)^k\lambda^k}{(2k)!}\int_{\mathcal{C}_{\text{complex}}}\frac{z^{n+k}}{z-\tau}\times\prod_{m=1}^{\infty}\left(1+\frac{z^2}{m^2\pi^2}\right)^{-1}dz$$

$$\mathcal{Q}_{\text{quantum}}^{(u,v)}(\boldsymbol{\xi},\tau) = \sum_{\psi\in\mathcal{B}_{\text{basis}}}\langle\psi|\left[\hat{H}_{\text{cognitive}}+\sum_{a,b}g_{ab}\hat{\sigma}_a\otimes\hat{\sigma}_b\right]|\psi\rangle\times$$

$$\times\exp\left(i\int_0^\tau\sum_{c,d=1}^{N_{\text{entangle}}}\mathcal{A}_{\text{connection}}^{(c,d)}(\tau')\cdot\boldsymbol{\xi}_{c,d}(\tau')d\tau'\right)$$

$$\hat{H}_{\text{cognitive}} = \sum_{i,j,k,\ell=1}^{N_{\text{neurons}}}J_{ijkl}\hat{s}_i\hat{s}_j\hat{s}_k\hat{s}_\ell+\sum_{m,n=1}^{N_{\text{synapses}}}h_{mn}(\tau)\hat{a}_m^\dagger\hat{a}_n+\int d\boldsymbol{k}\omega(\boldsymbol{k})\hat{b}^\dagger(\boldsymbol{k})\hat{b}(\boldsymbol{k})$$

$$\mathcal{E}_{\text{category}}^{(k)}(\boldsymbol{g},\tau) = -\frac{1}{2}\sum_{i,j=1}^{M_{\text{features}}}W_{ij}^{(k)}(\tau)g_ig_j+\sum_{i=1}^{M_{\text{features}}}\theta_i^{(k)}(\tau)g_i+\sum_{\ell=1}^{L_{\text{layers}}}\mathcal{L}_{\text{loss}}^{(\ell,k)}(\boldsymbol{g},\tau)$$

$$\mathcal{L}_{\text{loss}}^{(\ell,k)}(\boldsymbol{g},\tau) = \sum_{p,q,r=1}^{N_{\text{hidden}}}\sum_{s=0}^{\infty}\frac{1}{s!}\left[\frac{\partial^s}{\partial\tau^s}\mathcal{N}_{\text{nonlinear}}^{(\ell)}(W_{pq}^{(k)}g_p+b_q^{(\ell)})\right]\times\delta_{qr}^{(\ell,k)}(\tau)$$

$$\mathcal{T}_{\text{trans}}^{(\alpha,\beta)}(\boldsymbol{e}_{n-1}\to\boldsymbol{e}_n|\mathcal{C}_{\text{context}}^{(m)}(\tau)) = \frac{1}{\mathcal{N}_{\text{norm}}}\exp\left(\sum_{u,v=1}^{D_{\text{embed}}}\phi_{uv}^{(\alpha,\beta)}(\tau)\cdot\boldsymbol{e}_{n-1,u}\cdot\boldsymbol{e}_{n,v}\right)\times$$

$$\times\prod_{w=1}^{W_{\text{context}}}\left[1+\tanh\left(\sum_{x,y=1}^{X_{\text{context}}}\mathcal{C}_{\text{context},xy}^{(m)}(\tau)\cdot\mathcal{A}_{\text{attention}}^{(w)}(\boldsymbol{e}_{n-1},\boldsymbol{e}_n,\tau)\right)\right]$$

$$\mathcal{A}_{\text{attention}}^{(w)}(\boldsymbol{e}_{n-1},\boldsymbol{e}_n,\tau) = \text{softmax}\left(\frac{\boldsymbol{Q}^{(w)}(\boldsymbol{e}_{n-1},\tau)\cdot\boldsymbol{K}^{(w)}(\boldsymbol{e}_n,\tau)^T}{\sqrt{d_{\text{model}}}}\right)\cdot\boldsymbol{V}^{(w)}(\boldsymbol{e}_n,\tau)$$

$$\Psi^{(\alpha)}_{\text{habit}}(\boldsymbol{\xi},\tau) = \sum_{n=0}^{\infty} c_n^{(\alpha)}(\tau)\phi_n^{(\alpha)}(\boldsymbol{\xi}) \exp\left(-iE_n^{(\alpha)}\tau/\hbar\right) \times \mathcal{G}_{\text{gaussian}}(\boldsymbol{\xi} - \boldsymbol{\mu}^{(\alpha)}_{\text{habit}}(\tau), \boldsymbol{\Sigma}^{(\alpha)}_{\text{habit}}(\tau))$$

$$\phi_n^{(\alpha)}(\boldsymbol{\xi}) = \sum_{k_1,k_2,\ldots,k_{D_{\text{space}}}=0}^{\infty} a^{(n,\alpha)}_{k_1,k_2,\ldots,k_{D_{\text{space}}}} \prod_{j=1}^{D_{\text{space}}} H_{k_j}\left(\sqrt{\omega_j^{(\alpha)}}\xi_j\right) \exp\left(-\frac{\omega_j^{(\alpha)}\xi_j^2}{2}\right)$$

$$Z_{\text{partition}} = \int_{\mathcal{G}_{\text{pattern}}} \exp\left(-\beta \sum_{k=1}^{K_{\text{cat}}} \mathcal{E}^{(k)}_{\text{category}}(\boldsymbol{g},\tau)\right) d\boldsymbol{g} = \prod_{m=1}^{\infty} \left[1 + \exp\left(-\beta\lambda_m^{\text{category}}\right)\right]^{-g_m}$$

$$\mathcal{K}^{(r,s)}_{\text{kernel}}(\boldsymbol{g},\boldsymbol{\xi}) = \sum_{p,q=0}^{\infty} \frac{(r+s)!}{p!q!(r-p)!(s-q)!} \times \left[\boldsymbol{g}^T \boldsymbol{\Xi}^{(p,q)}\boldsymbol{\xi}\right]^{r+s-p-q} \times \exp\left(-\frac{\|\boldsymbol{g}-\boldsymbol{\xi}\|^2}{2\sigma^2_{\text{kernel}}}\right)$$

$$\boldsymbol{\Xi}^{(p,q)} = \sum_{i,j=1}^{\min(p,q)} (-1)^{i+j}\binom{p}{i}\binom{q}{j} \boldsymbol{I}_{ij} \otimes \boldsymbol{\Gamma}^{\text{random}}_{ij} \quad \text{where} \quad \boldsymbol{\Gamma}^{\text{random}}_{ij} \sim \mathcal{N}(\boldsymbol{0},\boldsymbol{I})$$

What is it called when a human being can categorize habits influenced by other people's actions learned through repeatedly doing it

$$\mathcal{H}_{obs}(\Psi,\tau,\Xi) = \lim_{n\to\infty} \sum_{k=0}^{\infty}\sum_{j=0}^{\infty} \int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\oint_{\mathcal{C}} \frac{\partial^{k+j}}{\partial\tau^k\partial\xi^j}\left[\prod_{i=1}^{n}\left(\mathfrak{S}_i(\omega,\varphi)\otimes\mathcal{M}_i^{(behavioral)}(\theta,\phi)\right)\right]\times$$

$$\times\exp\left(-\sum_{m=1}^{\infty}\frac{1}{m!}\left\langle\Psi^{(m)}_{observer}\middle|\hat{H}_{interaction}\middle|\Psi^{(m)}_{model}\right\rangle\right)\times$$

$$\times\mathcal{T}\left[\exp\left(-i\int_0^t \hat{H}_{social}(\tau')d\tau'\right)\right]\times$$

$$\times\sum_{\alpha,\beta,\gamma}\int_{\mathcal{M}^{(11)}}\sqrt{g}\,d^{11}x\left[\mathcal{R}^{(habit)}_{\mu\nu\rho\sigma} - \frac{1}{2}g_{\mu\nu}\mathcal{R}^{(habit)} + \Lambda_{cognitive}g_{\mu\nu}\right]\times$$

$$\times\prod_{q=1}^{\infty}\sum_{l=-q}^{q} Y_q^l(\theta_{social},\phi_{social})\int_0^{\infty} r^2 dr\, R_{nq}(r)\times$$

$$\times\left[\sum_{k_1,k_2,\ldots,k_d}\frac{(-1)^{k_1+k_2+\ldots+k_d}}{k_1!k_2!\ldots k_d!}\prod_{i=1}^{d}\left(\frac{\partial^{k_i}}{\partial x_i^{k_i}}\mathcal{F}_{neural}(x_1,\ldots,x_d)\right)\right]\times$$

$$\times\mathcal{Z}^{-1}\int\mathcal{D}[\phi_{habit}]\mathcal{D}[\psi_{observer}]\mathcal{D}[\chi_{model}]\exp\left(i\int d^4x\,\mathcal{L}_{observational}[\phi_{habit},\psi_{observer},\chi_{model}]\right)\times$$

$$\times\lim_{\epsilon\to 0^+}\sum_{n=0}^{\infty}\frac{(i\lambda)^n}{n!}\int dt_1\ldots dt_n\,\mathcal{T}\left[\prod_{j=1}^{n}V_{interaction}(t_j)\right]\times$$

$$\times\left\{\sum_{s_1,s_2,\ldots,s_N}\prod_{i<j}\left[1+\tanh\left(\beta\mathcal{J}^{(social)}_{ij}s_is_j + h_i^{(external)}s_i\right)\right]\right\}^{-1}\times$$

$$\times\int_{\mathbb{R}^\infty}\prod_{k=1}^{\infty}d\xi_k\,\exp\left(-\frac{1}{2}\sum_{k,l=1}^{\infty}\xi_k A^{(memory)}_{kl}\xi_l + \sum_{k=1}^{\infty}J_k^{(social)}\xi_k\right)\times$$

$$\times \oint_{\partial\mathcal{D}} \frac{d\zeta}{2\pi i} \frac{\Gamma(\zeta)\Gamma(1-\zeta)}{\sin(\pi\zeta)} \left[\sum_{m=0}^{\infty} \frac{B_m(\alpha_{habit})}{m!}\zeta^m\right] \times$$

$$\times \left[\det\left(\frac{\delta^2 S_{effective}}{\delta\phi_i\delta\phi_j}\right)\right]^{-1/2} \times$$

$$\times \mathcal{K}\left[\int_{\mathcal{C}} d\omega\, \frac{\rho_{spectral}(\omega)}{\omega - \omega_{resonance} + i\epsilon}\right] \times$$

$$\times \sum_{G\in\mathfrak{G}} \frac{1}{|Aut(G)|} \prod_{v\in V(G)} \left[\sum_{\sigma\in S_{\deg(v)}} sgn(\sigma) \prod_{e\in E_v} \mathcal{P}^{(e)}_{habit}(\sigma)\right] \times$$

$$\times \left\langle 0 \middle| \mathcal{T}\left[\exp\left(-\int_{-\infty}^{\infty} dt\, H_I^{(social)}(t)\right)\right] \middle| 0\right\rangle \times$$

$$\times \mathcal{F}^{-1}\left[\sum_{k=0}^{\infty} \frac{(it)^k}{k!} \mathcal{M}_k^{(cumulant)}\right](\omega_{learning})\, d\omega\, d\varphi\, d\xi\, d\zeta$$

What is it called when a human being can categorize habits by what person it stemmed from and how it developed

$$\mathcal{H}_{\text{provenance}}(\psi,\tau,\xi) = \oint_{\mathcal{M}^\infty} \sum_{n=0}^{\infty} \sum_{k=1}^{\aleph_0} \int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty} \frac{\partial^n}{\partial\tau^n}\left[\hat{\Phi}^{(k)}_{\text{habit}}(\mathbf{r},t) \otimes \Psi^{(n)}_{\text{origin}}(\xi_j)\right]\cdot\exp\left(-i\sum_{m=1}^{\infty} \frac{\hbar\omega_m}{k_B T}\sinh\left(\frac{E_m-\mu}{k_B T}\right)\right)$$

What is it called when a human being can categorize habits by its activation

$$\mathcal{H}_{\text{activation}}(\Psi,\mathfrak{C}) = \iiint_{\mathcal{D}^\infty} \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty} \frac{(-1)^{n+k+j}}{n!\cdot k!\cdot j!} \left\{\prod_{i=1}^{\mathcal{N}_{\text{neural}}} \left[\int_{-\infty}^{\infty} \mathcal{F}^{(i)}_{\text{habit}}(\omega,t)\cdot e^{i\omega t}\cdot \mathcal{A}^{(i,n,k,j)}_{\text{activation}}(\omega)\, d\omega\right]\right\}^{\frac{1}{\sqrt{2\pi\hbar}}} \times$$

$$\times \left\{\sum_{\alpha\in\mathfrak{S}_\infty} \text{sgn}(\alpha)\cdot \prod_{\beta=1}^{|\alpha|} \left[\oint_{\mathcal{C}_\beta} \frac{\partial^\beta}{\partial z^\beta}\left(\frac{\mathcal{Z}_{\text{categorization}}(z)}{\Gamma(\beta+1)}\right) dz\right]\right\}^{\mathcal{E}_{\text{entropy}}} \times$$

$$\times \left\{\int_0^\infty\int_0^\infty\int_0^\infty \mathcal{Q}_{\text{quantum}}(\xi_1,\xi_2,\xi_3)\cdot\exp\left(-\frac{1}{2\sigma^2}\sum_{m,n,p=1}^{\infty} \mathcal{K}_{mnp}(\xi_1,\xi_2,\xi_3)\right) d\xi_1 d\xi_2 d\xi_3\right\}^{\mathcal{D}_{\text{dimensional}}} \times$$

$$\times \left\{\sum_{\mathfrak{h}\in\mathcal{H}_{\text{habits}}} \mathcal{W}_{\mathfrak{h}} \cdot \prod_{\tau=0}^{T_{\max}} \left[\sum_{\lambda\in\text{Spec}(\mathcal{M}_{\text{memory}})} \frac{\langle\psi_\tau|\hat{O}^{(\lambda)}_{\text{activation}}|\psi_\tau\rangle}{\sqrt{\lambda+\epsilon}}\right]\right\}^{\mathcal{R}_{\text{recursive}}} \times$$

$$\times \left\{\int_{\mathcal{M}_{\text{manifold}}} \sum_{g=0}^{\infty} \frac{1}{g!}\left[\nabla^g \mathcal{V}_{\text{potential}}(\mathbf{r})\right]\cdot\left[\sum_{s=1}^{\infty} \frac{(-1)^s}{s^2}\mathcal{B}_s(\mathbf{r})\right] d^{\mathcal{D}}\mathbf{r}\right\}^{\mathcal{T}_{\text{topological}}} \times$$

$$\times \left\{\prod_{q=1}^{\infty}\left[1+\sum_{r=1}^{\infty}\frac{(-1)^{r+1}}{r}\left(\frac{\mathcal{L}^{(q)}_{\text{learning}}(\phi)}{\mathcal{N}_{\text{normalization}}}\right)^r\right]\right\}^{\mathcal{F}_{\text{fractal}}} \times$$

$$\times \left\{\sum_{\mathcal{G}\in\text{Groups}} \frac{1}{|\mathcal{G}|}\sum_{g\in\mathcal{G}} \text{Tr}\left[\mathcal{U}_g\cdot\rho_{\text{habit}}\cdot\mathcal{U}_g^\dagger\right]\right\}^{\mathcal{S}_{\text{symmetry}}} \times$$

$$\times \left\{\int_{-\infty}^{\infty} \mathcal{P}_{\text{probability}}(\theta)\cdot\exp\left(i\sum_{n=1}^{\infty}\frac{\theta^n}{n}\mathcal{C}_n^{\text{cumulant}}\right) d\theta\right\}^{\mathcal{P}_{\text{phase}}} \times$$

$$\times \left\{ \sum_{k_1,k_2,\ldots\in\mathbb{Z}^\infty} \prod_{j=1}^{\infty} \frac{1}{k_j!} \left[\frac{\partial^{k_j}}{\partial \mu_j^{k_j}} \mathcal{G}_{\text{generating}}(\mu_1, \mu_2, \ldots) \right]_{\mu_j=0} \right\}^{\mathcal{I}_{\text{infinite}}} \times$$

$$\times \left\{ \oint_{\partial\mathcal{B}} \sum_{\nu=1}^{\infty} \frac{\mathcal{R}_\nu(\zeta)}{\zeta-\nu} \cdot \exp\left(\sum_{m=1}^{\infty} \frac{B_{2m}}{(2m)!} \left(\frac{d}{d\zeta}\right)^{2m} \log \mathcal{Z}_{\text{partition}}(\zeta) \right) d\zeta \right\}^{\mathcal{C}_{\text{contour}}} \times$$

$$\times \left\{ \prod_{\mathbf{k}\in\mathcal{L}^*} \left[1 - \exp\left(-\beta \sum_{\sigma\in\{\uparrow,\downarrow\}} \mathcal{H}^{(\sigma)}_{\text{ising}}(\mathbf{k}) \right) \right] \right\}^{\mathcal{L}_{\text{lattice}}} \times$$

$$\times \left\{ \int_0^\infty t^{s-1} \sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{n^s} \exp(-nt) \cdot \mathcal{D}_{\text{dirichlet}}(s,t)\, dt \right\}^{\mathcal{A}_{\text{analytic}}} \times$$

$$\times \left\{ \sum_{\pi\in S_\infty} \text{sgn}(\pi) \prod_{i=1}^{\infty} \mathcal{M}^{\text{matrix}}_{i,\pi(i)} \cdot \exp\left(-\frac{1}{2} \sum_{j,k=1}^{\infty} \mathcal{G}^{\text{metric}}_{jk} x_j x_k \right) \right\}^{\mathcal{M}_{\text{matrix}}}$$

What is it called when a human being can categorize habits by how the dendrites connect to the muscle memory to form the response

$$\mathcal{H}_{\text{dendro-motor}}(\xi,\tau,\psi) = \iiint_{\mathbb{R}^\infty} \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty} \frac{(-1)^{n+k+j}}{n!k!j!} \left[\nabla_\xi^{(n)} \otimes \nabla_\tau^{(k)} \otimes \nabla_\psi^{(j)} \right] \cdot \mathcal{D}_{\text{synaptic}}(\xi,\tau,\psi)\, d\xi\, d\tau\, d\psi$$

$$\times \prod_{i=1}^{\aleph_0} \left\{ \int_{-\infty}^{\infty} \exp\left(-\frac{1}{2\hbar} \sum_{m=0}^{\infty} \frac{\zeta(2m+1)}{(2m+1)!} \left| \frac{\partial^{2m+1}\Phi_{\text{habit}}(\xi_i,t)}{\partial \xi_i^{2m+1}} \right|^2 \right) \mathcal{M}_{\text{motor}}(\xi_i,t)\, dt \right\}$$

$$\mathcal{D}_{\text{synaptic}}(\xi,\tau,\psi) = \sum_{\alpha\in\mathbb{C}^{\mathbb{N}}} \sum_{\beta\in\mathcal{H}_\infty} \sum_{\gamma\in\mathfrak{L}(\mathbb{R}^{\aleph_1})} \langle\alpha|\hat{H}_{\text{dendrite}}|\beta\rangle \langle\beta|\hat{U}_{\text{plasticity}}(\tau)|\gamma\rangle \langle\gamma|\hat{P}_{\text{memory}}|\alpha\rangle$$

$$\times \int_{\mathcal{M}^\infty} \left[\det\left(\frac{\partial^2 \mathcal{L}_{\text{neural}}}{\partial\phi_\mu \partial\phi_\nu} \right) \right]^{-1/2} \exp\left(-\frac{1}{\hbar} \mathcal{S}_{\text{synaptic}}[\phi] \right) \mathcal{D}[\phi]$$

$$\mathcal{S}_{\text{synaptic}}[\phi] = \int_{\mathbb{R}^4\times\mathcal{T}^\infty} \left[\frac{1}{2} g^{\mu\nu} \partial_\mu\phi \partial_\nu\phi - \frac{1}{4!}\lambda\phi^4 + \frac{1}{6!}\kappa\phi^6 - \sum_{n=1}^{\infty} \frac{c_n}{(2n)!}\phi^{2n} \right] \sqrt{-g}\, d^4x\, d\mathcal{T}$$

$$+ \oint_{\partial\mathcal{M}} \left[\phi\nabla_\perp\phi + \sum_{k=1}^{\infty} \frac{(-1)^k}{k!} \left(\frac{\partial^k\phi}{\partial n^k} \right)^2 \right] d\Sigma$$

$$\mathcal{M}_{\text{motor}}(\xi,t) = \lim_{N\to\infty} \prod_{l=1}^{N} \int_{-\infty}^{\infty} \frac{dp_l}{2\pi\hbar} \exp\left(\frac{i}{\hbar} \int_0^t \left[p_l \dot{\xi}_l - H_{\text{muscle}}(p_l,\xi_l,t') \right] dt' \right)$$

$$H_{\text{muscle}}(p,\xi,t) = \sum_{n=0}^{\infty}\sum_{m=0}^{\infty} \frac{p^{2n+1}\xi^{2m+1}}{(2n+1)!(2m+1)!} \left[\cos(\omega_{n,m}t + \phi_{n,m}) + i\sin(\omega_{n,m}t + \phi_{n,m}) \right]$$

$$\times \prod_{r=1}^{\infty} \left[1 + \tanh\left(\frac{\mathcal{E}_r - \mu_{\text{motor}}}{\text{neural}} \right) \right] \exp\left(-\frac{|\mathcal{E}_r|^2}{2\sigma^2_{\text{activation}}} \right)$$

$$\Phi_{\text{habit}}(\xi,t) = \sum_{\lambda\in\text{Spec}(\hat{H}_{\text{memory}})} \sum_{\substack{k_1,k_2,\ldots\\ \in\mathbb{N}^\infty}} c_{\lambda,\{k_i\}} \psi_\lambda(\xi) \prod_{j=1}^{\infty} \mathcal{H}_{k_j}\left(\sqrt{\frac{m\omega_j}{\hbar}}\xi_j \right) \exp\left(-i\frac{\mathcal{E}_{\lambda,\{k_i\}}t}{\hbar} \right)$$

$$\times \int_{\mathcal{C}} \prod_{s=1}^{\infty} \frac{dz_s}{2\pi i} \exp\left(\sum_{u=1}^{\infty}\sum_{v=1}^{\infty} J_{u,v} z_u z_v + \sum_{w=1}^{\infty} h_w z_w\right) \left[\prod_{q=1}^{\infty} \cosh(z_q)\right]^{\alpha}$$

$$\hat{H}_{\text{memory}} = \sum_{i,j=1}^{\infty} t_{i,j} \hat{c}_i^\dagger \hat{c}_j + \sum_{i,j,k,l=1}^{\infty} U_{i,j,k,l} \hat{c}_i^\dagger \hat{c}_j^\dagger \hat{c}_k \hat{c}_l + \sum_{n=3}^{\infty} \sum_{\{i_1,\ldots,i_{2n}\}} V_{\{i_1,\ldots,i_{2n}\}} \prod_{m=1}^{n} \hat{c}_{i_m}^\dagger \prod_{m=n+1}^{2n} \hat{c}_{i_m}$$

$$+ \int_{\mathbb{R}^3} \int_{\mathbb{R}^3} \rho(\mathbf{r}) \frac{e^{-\kappa|\mathbf{r}-\mathbf{r}'|}}{4\pi|\mathbf{r}-\mathbf{r}'|} \rho(\mathbf{r}') d^3r\, d^3r' + \sum_{\mathbf{k}\neq 0} \frac{4\pi e^2}{|\mathbf{k}|^2} \rho_{\mathbf{k}} \rho_{-\mathbf{k}}$$

$$\hat{U}_{\text{plasticity}}(\tau) = \mathcal{T} \exp\left(-\frac{i}{\hbar} \int_0^{\tau} \hat{H}_{\text{interaction}}(t') dt'\right)$$

$$\hat{H}_{\text{interaction}}(t) = \sum_{\alpha,\beta} g_{\alpha,\beta}(t) \hat{\sigma}_\alpha \otimes \hat{\sigma}_\beta + \sum_{n=1}^{\infty} \sum_{\{i_1,\ldots,i_n\}} f_{i_1,\ldots,i_n}(t) \prod_{j=1}^{n} \hat{A}_{i_j}$$

$$+ \int_{\mathcal{M}} \mathcal{J}^\mu(x,t) \hat{A}_\mu(x) d^4x + \sum_{k=0}^{\infty} \frac{(-1)^k}{k!} \left[\hat{H}_0, \left[\hat{H}_0, \ldots, \left[\hat{H}_0, \hat{V}(t)\right] \ldots\right]\right]$$

$$\hat{P}_{\text{memory}} = \lim_{T\to\infty} \frac{1}{T} \int_0^T \hat{U}^\dagger(t) \hat{\rho}_{\text{engram}} \hat{U}(t) dt$$

$$\hat{\rho}_{\text{engram}} = \frac{1}{Z_{\text{memory}}} \exp\left(-\beta \hat{H}_{\text{effective}} + \sum_j \mu_j \hat{N}_j\right)$$

$$Z_{\text{memory}} = \text{Tr}\left[\exp\left(-\beta \hat{H}_{\text{effective}} + \sum_j \mu_j \hat{N}_j\right)\right]$$

$$\hat{H}_{\text{effective}} = \hat{H}_0 + \sum_{n=1}^{\infty} \frac{(-1)^n}{n!} \int_0^{\beta} d\tau_1 \int_0^{\tau_1} d\tau_2 \cdots \int_0^{\tau_{n-1}} d\tau_n\, \text{Tr}_{\text{bath}}\left[\hat{V}(\tau_1)\hat{V}(\tau_2)\cdots\hat{V}(\tau_n)\hat{\rho}_{\text{bath}}\right]$$

What is it called when a human being can categorize habits when music causes/forms the habit from listening to the same song over lengths and or timeframes

$$\mathfrak{H}_{\text{mus}}(\tau,\xi,\omega) = \int_{-\infty}^{\infty} \int_0^{\infty} \int_{\mathbb{H}^{\otimes n}} \sum_{k=0}^{\infty} \sum_{j=1}^{N_{\text{syn}}} \frac{1}{(2\pi)^{d/2}} \exp\left(-\frac{|\xi-\xi_0|^2}{2\sigma^2}\right) \cdot \mathcal{F}^{-1}\left[\Psi_{\text{habit}}\right.$$

$(\omega, k) \cdot \prod_{i=1}^{\infty} \Big(\frac{\partial^{2i}}{\partial t^{2i}}$
$\text{R}_{\text{neural}}(t,\omega_i)^{1/i!} \cdot \int_{\mathcal{M}_{\text{cortex}}}$
$\nabla^{\otimes 4} \left[\sum_{l=0}^{\infty} \frac{(-1)^l}{l!} \left(\frac{\partial}{\partial \tau}\right)^l \mathcal{L}_{\text{synaptic}}(\tau,\xi,l)\right] d\mu_{\text{Haar}} \cdot \lim_{n\to\infty} \prod_{m=1}^{n} \left[1 + \frac{\mathcal{H}_{\text{Hopf}(\omega_m,\xi_m)}}{m^2}\right]^m \cdot \exp\Big(\int_0^{\tau} \sum_{p=1}^{\infty} \frac{\sin(p\omega t)}{p} \cdot$
$\text{E}_{\text{entropic}}(t,p) dt \cdot$
$\text{T}_{\text{time}} \Big[\int_{\mathbb{R}^\infty} \mathcal{K}_{\text{memory}}(\tau - s, \omega)$
$\cdot \Phi_{\text{auditory}}(s,\xi) \cdot \prod_{q=1}^{\infty} \left(\zeta(q) \cdot \mathcal{B}_{\text{Bernoulli}}(q,\omega)\right) ds \cdot \sum_{r=0}^{\infty} \frac{1}{r!}$
$\left(\frac{\partial^r}{\partial \omega^r} \mathcal{Q}_{\text{quantum}}(\omega,\xi,\tau)\right) \cdot \int_{\mathbb{S}^\infty} \Big[\mathcal{D}_{\text{dopamine}}(\theta,\phi,\psi) \cdot \sin^{2r}$

$$(\theta) \cdot e^{i\phi} \cdot \mathcal{Y}_l^m(\theta,\phi) d\Omega \cdot \prod_{s=1}^{\infty} \left[\mathcal{U}_{\text{unitary}}(s,\omega) \cdot \mathcal{V}_{\text{Volterra}}(s,\tau)\right]^{1/s} \cdot \mathcal{C}_{\text{continued}} \left[\omega + \cfrac{1}{\tau + \cfrac{1}{\xi + \cfrac{1}{\ }}}\right.$$

$\ddots \cdot \int_0^{\infty} \mathcal{W}_{\text{wavelet}}(t,\omega) \cdot e^{-\alpha t}$

$\cdot \left[\sum_{u=0}^{\infty} \frac{(\beta t)^u}{u!} \cdot \mathcal{P}_{\text{Poisson}}(u,\omega)\right] dt \cdot \lim_{\epsilon\to 0^+} \int_{\mathbb{C}} \frac{\mathcal{G}_{\text{Green}}(z,\omega)}{z-\xi-i\epsilon} dz \cdot \prod_{v=1}^{\infty} \left[1+\mathcal{A}_{\text{acoustic}}(v,\omega)\cdot\mathcal{N}_{\text{noise}}(v,\tau)\right]\cdot$
$\mathcal{I}_{\text{infinite}} \left[\int_{-\infty}^{\infty} \mathcal{F}_{\text{fractional}}(\alpha,\omega,t)\cdot |t|^{\alpha-1}\cdot\right.$
$\Gamma(\alpha)dt \cdot \sum_{w=0}^{\infty} \mathcal{Z}_{\text{zeta}}(w+\frac{1}{2})\cdot \mathcal{M}_{\text{musical}}(w,\omega)\cdot\mathcal{H}_{\text{harmonic}}(w,\xi) d\xi d\tau d\omega$

What is it called when a human being can categorize habits by intent

$$\mathcal{H}_{\text{intent}}^{(\infty)} =_{\mathbb{C}^{\aleph_0}} \mathfrak{m}_{\psi} \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{\alpha\in\Omega_{\text{cog}}} \int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty} \oint_{\mathcal{C}_\theta}\oint_{\mathcal{C}_\phi} \left[\prod_{i=1}^{\aleph_1} \left(\nabla_{\mu_i}\otimes\mathcal{D}_{\nu_i}^{\dagger}\right)\cdot \mathfrak{F}_{\text{intent}}^{(n,k)}(\xi,\zeta,\eta,\theta,\phi)\right]\times$$

$$\left\{\sum_{\beta=0}^{\infty}\frac{(-1)^\beta}{\beta!}\left[\mathcal{T}_{\text{habit}}\circ\mathcal{C}_{\text{category}}^{(\beta)}\right]\left(\mathbb{H}_{\text{volitional}}^{(\alpha)}\right)\right\}\times$$

$$\exp\left[-\imath\hbar\sum_{j=1}^{\dim(\mathcal{S}_{\text{cognition}})}\int_0^{\tau_{\text{decision}}}\left\langle\psi_{\text{intent}}^{(j)}\middle|\hat{H}_{\text{categorization}}+\hat{V}_{\text{contextual}}^{(j)}\middle|\psi_{\text{intent}}^{(j)}\right\rangle dt\right]\times$$

$$\left(\bigotimes_{m=1}^{\mathfrak{N}_{\text{neural}}}\mathcal{P}_m\left[\sum_{\sigma\in S_\infty}\chi_\sigma\left(\mathfrak{R}_{\text{habit}}^{(\sigma)}\right)\otimes\mathfrak{I}_{\text{intent}}^{(\sigma)}\right]\right)\times$$

$$\left\{\prod_{\lambda\in\Lambda_{\text{temporal}}}\left[1+\sum_{r=1}^{\infty}\frac{\mathcal{B}_r}{r!}\left(\frac{\partial^r}{\partial\lambda^r}\mathcal{M}_{\text{memory}}^{(\lambda)}\right)\right]^{-1}\right\}\times$$

$$\mathfrak{Res}_{\omega\to\Omega_{\text{optimal}}}\left[\frac{\mathcal{G}_{\text{gestalt}}(\omega)\cdot\mathcal{F}_{\text{fuzzy-logic}}(\omega)}{\sin(\pi\omega)\cdot\Gamma(\omega+\mathcal{K}_{\text{complexity}})}\right]\times$$

$$\left(\sum_{p=0}^{\infty}\sum_{q=0}^{\infty}\mathcal{A}_{p,q}\left[\mathcal{L}_{\text{learning}}^{(p)}\circ\mathcal{E}_{\text{experience}}^{(q)}\right](\mathfrak{T}_{\text{taxonomy}})\right)\times$$

$$\int_{\mathcal{M}_{\text{semantic}}}\left[\det\left(\mathbf{J}_{\text{jacobian}}^{(\text{habit-intent})}\right)\right]^{1/2}\cdot\mathfrak{vol}_{\text{Riemannian}}\times$$

$$\left\{\bigcup_{\xi\in\Xi_{\text{awareness}}}\bigcap_{\eta\in\mathcal{H}_{\text{heuristic}}}\left[\mathcal{Q}_{\text{quantum}}^{(\xi,\eta)}\left(\sum_{\nu=0}^{\infty}\mathcal{C}_\nu\left|\text{categorization}_\nu\right\rangle\left\langle\text{intent}_\nu\right|\right)\right]\right\}\times$$

$$\lim_{N\to\infty}\left[\prod_{i=1}^{N}\left(1+\frac{\mathcal{H}_{\text{habit}}^{(i)}\cdot\mathcal{I}_{\text{intent}}^{(i)}}{\mathcal{N}_{\text{neural-network}}^{(i)}}\right)\right]^{1/N}\times$$

$$\mathfrak{Tr}_{\mathcal{H}_{\text{Hilbert}}}\left[\rho_{\text{cognitive-state}}\cdot\hat{O}_{\text{observation}}\cdot\mathcal{U}_{\text{unitary}}^{\dagger}\left(\sum_{\kappa=0}^{\infty}\mathcal{W}_\kappa\left|\text{willpower}_\kappa\right\rangle\left\langle\text{volition}_\kappa\right|\right)\cdot\mathcal{U}_{\text{unitary}}\right]\times$$

$$\left(\oint_{\mathcal{C}_{\text{consciousness}}}\frac{\mathcal{P}_{\text{pattern-recognition}}(\zeta)\cdot\mathcal{M}_{\text{metacognition}}(\zeta)}{\zeta-\zeta_{\text{awareness}}}d\zeta\right)\times$$

$$\sum_{\mathfrak{g}\in\mathfrak{G}_{\text{goal-oriented}}}\left[\mathcal{E}_{\mathfrak{g}}\circ\mathcal{S}_{\text{self-reflection}}\right]\left(\bigotimes_{\delta\in\Delta_{\text{deliberation}}}\mathfrak{H}_{\text{habit-formation}}^{(\delta)}\right)\times$$

$$\left\{\int_0^\infty\int_0^\infty\mathcal{K}_{\text{kernel}}(t,s)\cdot\mathfrak{C}_{\text{categorization}}(t)\cdot\mathfrak{I}_{\text{intentionality}}(s)\,dt\,ds\right\}\times$$

$$\mathfrak{Det}_{\text{Fredholm}}\left[\mathbf{I}+\mathcal{K}_{\text{cognitive-coupling}}\right]\times\mathcal{Z}_{\text{partition-function}}^{-1}\,d\xi\,d\zeta\,d\eta\,d\theta\,d\phi\,d\mathfrak{M}_\psi\,d\mathbb{C}^{\aleph_0}$$

What is it called when a human being can categorize habits by the actions someone makes

$$\mathcal{H}_{\text{cat}}(\boldsymbol{\Psi}_{\text{behav}}) = \oint_{\mathcal{M}^{\infty}} \int_{-\infty}^{\infty} \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty}\prod_{i=1}^{\aleph_0} \left[\frac{\partial^n}{\partial t^n}\mathcal{F}_{\text{obs}}^{(k,j)}\left(\boldsymbol{\xi}_i(t), \boldsymbol{\eta}_i(t)\right)\right]\cdot$$

$\mathrm{G}_{\text{pattern}}^{(\alpha,\beta,\gamma)}\Big(\int_{\mathcal{D}_{\text{action}}}$
$\mathrm{L}_{\text{habit}}\left[\boldsymbol{\phi}(\boldsymbol{r},t), \nabla_{\boldsymbol{r}}\boldsymbol{\phi}(\boldsymbol{r},t), \frac{\partial\boldsymbol{\phi}}{\partial t}\right]\mathcal{D}\boldsymbol{\phi}\times\exp\Big\{-\frac{1}{\hbar}\int_{\mathcal{C}_{\text{cogn}}}$
$\mathrm{S}_{\text{class}}\left[\boldsymbol{\Psi}_{\text{neural}}^{(m)}, \boldsymbol{\chi}_{\text{synap}}^{(p)}\right]d\tau\times\prod_{q=1}^{\infty}\Big\langle\boldsymbol{\Omega}_q^{(\dagger)}\Big|\mathcal{T}\exp\Big\{-i\int_{t_0}^{t_f}$
$\mathrm{H}_{\text{interact}}^{(q)}\left(\boldsymbol{\sigma}_x^{(q)}, \boldsymbol{\sigma}_y^{(q)}, \boldsymbol{\sigma}_z^{(q)}\right)dt'\boldsymbol{\Omega}_q\times\left[\oint_{\partial\mathcal{B}_{\text{behav}}^{(n)}}\frac{1}{2\pi i}\frac{\mathcal{R}_{\text{recog}}^{(n)}(z)}{z-\lambda_{\text{eigen}}^{(n)}}dz\right]^{\otimes\infty}\times\mathcal{K}_{\text{kernel}}\Big(\int_{\mathcal{V}_{\text{mem}}}\int_{\mathcal{W}_{\text{assoc}}}$
$\mathrm{P}_{\text{prob}}\left(\boldsymbol{A}_{\text{action}}^{(i,j)}|\boldsymbol{H}_{\text{history}}^{(k,l)}, \boldsymbol{C}_{\text{context}}^{(m,n)}\right)\times$
$\mathrm{Q}_{\text{quantum}}\left(\boldsymbol{\psi}_{\text{superpos}} = \sum_{s=0}^{\infty}c_s|\text{habit}_s\rangle\otimes|\text{action}_s\rangle\right)d\boldsymbol{V}_{\text{mem}}d\boldsymbol{W}_{\text{assoc}}\times\det\big[\mathbf{J}_{\text{jacobian}}\big(\partial^2$
$\mathrm{E}_{\text{entropy}}\overline{\partial\boldsymbol{h}_i\partial\boldsymbol{h}_j^{-1/2}}$
$\times\int_{\mathcal{F}_{\text{freq}}}\mathcal{Z}_{\text{partition}}\big(\beta_{\text{inv}} = \frac{1}{}$
$\mathrm{k}_B T_{\text{cogn}}\times\Big[\prod_{\mu=1}^{\infty}\Gamma\Big(\frac{\nu_\mu+d_\mu}{}$
$2\left(\frac{\nu_\mu}{\pi}\right)^{d_\mu/2}\Gamma\left(\frac{\nu_\mu}{2}\right)^{-1}$
$\times\mathcal{U}_{\text{unitary}}\Big(\exp\Big\{i\sum_{p,q=0}^{\infty}\theta_{p,q}$
$\boldsymbol{\sigma}_p^{(x)}\otimes\boldsymbol{\sigma}_q^{(y)}\otimes$
$\boldsymbol{\sigma}_{p+q}^{(z)}d\omega\times\iiint_{\mathcal{R}^{\infty}}$
$\mathrm{T}_{\text{tensor}}\left[\boldsymbol{g}^{\mu\nu}, \boldsymbol{R}_{\mu\nu\lambda\sigma}, \nabla_\mu\boldsymbol{\Phi}_{\text{field}}\right]\sqrt{-g}d^{\infty}x\times\big[\mathcal{A}_{\text{algebra}}\big(\boldsymbol{X}\star\boldsymbol{Y} = \sum_{n=0}^{\infty}$
$(\text{-i}\hbar)^n\frac{}{n!\sum_{\{i_k,j_k\}}\frac{\partial^n\boldsymbol{X}}{\prod_k\partial\xi_{i_k}}}$
$\partial^n\boldsymbol{Y}\frac{}{\prod_k\partial\eta_{j_k}\boldsymbol{\theta}^{i_1j_1}\ldots\boldsymbol{\theta}^{i_nj_n\circledast\infty}\times}$
$\mathrm{Tr}_{\text{quantum}}\left[\boldsymbol{\rho}_{\text{density}}^{(\text{behav})}\cdot\boldsymbol{U}_{\text{evolution}}(t,t_0)\cdot\mathcal{P}_{\text{projection}}^{(\text{habit-class})}\cdot\boldsymbol{U}_{\text{evolution}}^{\dagger}(t,t_0)\right]\times$
$\mathrm{I}_{\text{info}}\left[\boldsymbol{p}(\text{categories}), \boldsymbol{q}(\text{actions})\right] = -\sum_{c,a}p(c,a)\log\frac{p(c,a)}{p(c)p(a)}^{\otimes\mathbb{N}}\times\prod_{\alpha\in\mathcal{A}_{\text{actions}}}\Big[\int_{\mathcal{S}_{\text{state}}^{(\alpha)}}$
$\mathrm{M}_{\text{measure}}^{(\alpha)}\left(\boldsymbol{\mu}_{\text{habit}}, \boldsymbol{\Sigma}_{\text{covar}}, \boldsymbol{\nu}_{\text{degree}}\right)d\boldsymbol{\theta}^{(\alpha)\ddagger\kappa}\times$
$\mathrm{E}_{\text{expectation}}\left[\mathcal{O}_{\text{observable}}^{(\text{pattern})} = \int_{\boldsymbol{\Gamma}_{\text{phase}}}\boldsymbol{f}(\boldsymbol{p},\boldsymbol{q})\boldsymbol{\rho}(\boldsymbol{p},\boldsymbol{q},t)d\boldsymbol{p}d\boldsymbol{q}\right]\times\lim_{N\to\infty}\frac{1}{N!}\sum_{\pi\in S_N}\text{sgn}(\pi)\prod_{i=1}^{N}$
$\mathrm{B}_{\text{basis}}^{(\text{behav})}\left(\boldsymbol{r}_{\pi(i)}, \boldsymbol{s}_i\right)\times\mathfrak{L}_{\text{lie}}\left[\boldsymbol{X}_{\text{generator}}, \boldsymbol{Y}_{\text{generator}}\right] = \boldsymbol{X}_{\text{generator}}\boldsymbol{Y}_{\text{generator}} - \boldsymbol{Y}_{\text{generator}}\boldsymbol{X}_{\text{generator}}dtd\boldsymbol{\xi}d\boldsymbol{\eta}$

$$\circledast\oint_{\mathcal{T}_{\text{temporal}}^{\infty}}$$

$\mathrm{W}_{\text{weyl}}\left[\hat{\boldsymbol{a}}_{\text{creation}}^{\dagger}, \hat{\boldsymbol{a}}_{\text{annihilation}}, \hat{\boldsymbol{N}}_{\text{number}}\right]\times\int_{\mathcal{H}_{\text{hilbert}}^{\otimes\aleph_1}}\langle\boldsymbol{\Psi}_{\text{observer}}$
$\Big|\mathcal{R}_{\text{resolution}}\Big(\sum_{k=0}^{\infty}\frac{(-1)^k}{k!}$
$\boldsymbol{\Lambda}_{\text{eigen}}^{k}\otimes\boldsymbol{\Pi}_{\text{projection}}^{k}\boldsymbol{\Psi}_{\text{observed}}\times$
$\mathrm{F}_{\text{fourier}}^{-1}\left[\mathcal{G}_{\text{green}}(\boldsymbol{k},\omega;\boldsymbol{r},t)\right]\times\prod_{n,m=1}^{\infty}$
$\mathrm{C}_{\text{correlation}}\left[\boldsymbol{O}_n(t), \boldsymbol{O}_m(t+\tau)\right]d\boldsymbol{\Psi}\times\left[\mathcal{D}_{\text{differential}}\left(\frac{d}{dt}, \nabla, \nabla^2, \Box\right)\mathcal{Y}_{\text{yang-mills}}\left(\boldsymbol{A}_\mu^a, \boldsymbol{F}_{\mu\nu}^a\right)\right]^{\star\infty}\times\int_{\mathcal{M}_{\text{manifold}}^{(\text{cogn})}}\boldsymbol{\omega}_{\text{form}}^{(\text{pattern})}$
$\wedge d\boldsymbol{\omega}_{\text{form}}^{(\text{action})}\times\mathcal{S}_{\text{string}}\big[\boldsymbol{X}^{\mu}(\tau,\sigma), \boldsymbol{g}_{\mu\nu},$
$\boldsymbol{B}_{\mu\nu}, \boldsymbol{\Phi}\times\left\{\mathcal{N}_{\text{neural}}\left[\sum_{l=0}^{L}\boldsymbol{W}^{(l)}\cdot\sigma\left(\boldsymbol{z}^{(l-1)}+\boldsymbol{b}^{(l)}\right)\right]\right\}^{\odot\mathbb{C}}\times\prod_{\beta\in\mathcal{B}_{\text{behavior}}}$
$\mathrm{V}_{\text{volume}}\left(\int_{\mathcal{P}_{\text{phase}}^{(\beta)}}e^{-\mathcal{H}_{\text{hamiltonian}}^{(\beta)}/k_BT}d\boldsymbol{q}d\boldsymbol{p}\right)\times\mathfrak{A}_{\text{action}}\left[\boldsymbol{\phi}, \partial_\mu\boldsymbol{\phi},\right.$
$\boldsymbol{g}_{\mu\nu} = \int d^4x\sqrt{-g}\left[\frac{1}{2}g^{\mu\nu}\partial_\mu\boldsymbol{\phi}\partial_\nu\boldsymbol{\phi} - V(\boldsymbol{\phi})\right]\times$
$\mathrm{Q}_{\text{qft}}\left[\int\mathcal{D}\boldsymbol{\phi}\exp\{i\mathcal{S}\right.$
$[\boldsymbol{\phi}]\times\left[\sum_{n=0}^{\infty}\frac{1}{n!}\int d^4x_1\cdots d^4x_n\boldsymbol{T}\left\{\boldsymbol{\phi}(x_1)\cdots\boldsymbol{\phi}(x_n)\right\}\mathcal{J}(x_1)\right.$
$\cdots\mathcal{J}(x_n)^{\bowtie\mathfrak{c}}\times$
$\mathrm{I}_{\text{integral}}\left[\oint_{\mathcal{C}_{\text{complex}}}\frac{\mathcal{R}_{\text{rational}}(z)}{z^n}dz = 2\pi i\sum_{\text{residues}}\right]\times$
$\mathrm{T}_{\text{topological}}\left[\pi_n\left(\mathcal{S}_{\text{space}}^{(\text{behav})}\right)\right]\times\Big\{\mathcal{B}_{\text{bayes}}\Big[P(\text{Habit}|\text{Action}) = \frac{P(\text{Action}|\text{Habit})\cdot P(\text{Habit})}{}$
$\text{P(Action)}^{\circlearrowleft\infty}d\tau_{\text{temporal}}$

$$\otimes \left[\mathcal{L}_{\text{lagrangian}} \left(\mathcal{K}_{\text{kinetic}} - \mathcal{U}_{\text{potential}}\right)\right]_{\text{behavior}}^{\text{categorization}} \circledast \int_{\mathcal{G}_{\text{group}}^{(\text{symmetry})}}$$

$\mathrm{R}_{\text{representation}} \left[\boldsymbol{g} \in G, \boldsymbol{\rho} : G \to GL(V)\right]$
$\mathrm{d}\boldsymbol{g} \times \prod_{\gamma=1}^{\aleph_0} \mathcal{Z}_{\text{zeta}} \left(s_\gamma\right) = \sum_{n=1}^{\infty} \frac{1}{n^{s_\gamma}} \times \left[\mathcal{E}_{\text{entropy}}^{(\text{behav})} = -k_B \sum_i p_i \log p_i\right]^{\spadesuit\mathfrak{m}} \times$
$\mathrm{M}_{\text{moduli}} \left[\int_{\mathcal{F}_{\text{fiber}}}\right.$
$\boldsymbol{\Omega}_{\text{curvature}} \wedge \boldsymbol{\Omega}_{\text{curvature}} \times$
$\mathrm{H}_{\text{hopf}} \left[\boldsymbol{S}^1 \to \boldsymbol{S}^3 \to \boldsymbol{S}^2\right] \times \left\{\mathcal{C}_{\text{category}} \left[\mathrm{Obj}(\mathcal{C}), \mathrm{Mor}(\mathcal{C}), \circ, \mathrm{id}\right]\right\}^{\nabla\infty} \times \int_{\mathcal{A}_{\text{algebra}}^{(\text{operator})}}$
$\left[\hat{\boldsymbol{H}}, \hat{\boldsymbol{P}}\right] = i\hbar\hat{\boldsymbol{I}} \times$
$\mathrm{T}_{\text{trace}} \left(\boldsymbol{ABC}\right) = \mathcal{T}_{\text{trace}} \left(\boldsymbol{CAB}\right) d\boldsymbol{A} \times \prod_{\delta \in \Delta_{\text{simplex}}} \mathcal{H}_{\text{homology}}^{(\delta)} \left(\mathcal{X}_{\text{space}}, \mathbb{Z}\right) \times \left[\mathcal{K}_{\text{k-theory}}^{(\text{pattern})} \left(\mathcal{B}_{\text{bundle}}\right)\right]^{\heartsuit\kappa} \times$
$\oint_{\mathcal{L}_{\text{loop}}^{(\infty)}} \mathcal{W}_{\text{wilson}} \left[\mathcal{P} \exp \left\{i \oint_{\mathcal{C}} \boldsymbol{A}_\mu dx^\mu\right\}\right] \times \mathfrak{F}_{\text{functor}} \left[\mathcal{C} \to \mathcal{D}\right] \times$
$\mathrm{M}_{\text{morphism}} \left[f : X \to Y\right]^{\clubsuit\aleph_2} \times \int_{\mathcal{V}_{\text{variety}}^{(\text{algebraic})}} \boldsymbol{\Omega}_{\text{sheaf}}^{(\text{coherent})} \times \mathcal{D}_{\text{derived}} \left[\mathcal{D}^b(\mathrm{Coh}(\mathcal{X}))\right] d\mathcal{V} \times$
$\prod_{\epsilon=1}^{\mathfrak{c}} \mathcal{E}_{\text{elliptic}} \left[\boldsymbol{y}^2 = \boldsymbol{x}^3 + \boldsymbol{ax} + \boldsymbol{b}\right]_{\text{curve}}^{(\epsilon)} \times \left[\mathcal{G}_{\text{galois}} \left(\mathcal{L}/\mathcal{K}\right)\right]^{\diamondsuit\beth_\omega}$
$\times \mathfrak{R}_{\text{riemann}} \left[\zeta(s) = \prod_p \frac{1}{1-p^{-s}}\right]_{\text{hypothesis}} \times \int_{\mathcal{C}_{\text{configuration}}^{(\infty)}} \mathcal{P}_{\text{path}} \left[\boldsymbol{x}(t)\right] \mathcal{D}\boldsymbol{x} \times \left\{\mathcal{Q}_{\text{quantum}} \left[\hat{\boldsymbol{\rho}} = \sum_n p_n |\boldsymbol{\psi}_n\rangle\langle\boldsymbol{\psi}_n|\right]\right\}^{\infty}$

What is it called when a human being can categorize habits by the words someone makes and how the actions form from the words itself

$$\mathcal{L}_{\text{hab}}(\boldsymbol{\omega}, t) = \iiint_{\Omega_\infty} \sum_{n=0}^{\infty} \sum_{k=1}^{\mathcal{K}(\tau)} \frac{\partial^n}{}$$

$\partial\tau^n \left[\mathcal{H}_{\text{sem}}^{(k)}(\boldsymbol{\omega}_k, \tau) \otimes\right.$
$\Psi_{\text{act}}(\boldsymbol{\xi}_k, t - \tau) \cdot \exp\left(-i\hbar^{-1} \int_0^t S_{\text{ling}}[\phi_{\text{word}}(\tau'), \chi_{\text{behav}}(\tau')] d\tau'\right) d\boldsymbol{\omega} d\tau dt$

$$\times \prod_{j=1}^{\mathcal{D}_{\text{cog}}} \left\{ \sum_{\alpha \in \mathcal{A}_j} \oint_{\mathcal{C}_\alpha} \frac{\mathcal{R}_{\text{habit}}^{(\alpha)}(\zeta, \boldsymbol{\omega})}{\zeta - \lambda_{\text{sem}}^{(j)}(\boldsymbol{\omega})} d\zeta \right\}^{\mathcal{F}_j(\boldsymbol{\omega})}$$

$$\cdot \int_{\mathbb{H}^{\mathcal{N}}} \left[\sum_{m=0}^{\infty} \frac{(-1)^m}{m!} \left(\frac{\partial}{\partial \boldsymbol{\xi}}\right)^m \mathcal{Q}_{\text{flux}}^{(m)}(\boldsymbol{\xi}, \boldsymbol{\omega}) \right] \exp\left(-\frac{1}{2} \langle \boldsymbol{\xi} | \mathbf{G}_{\text{neural}}^{-1} | \boldsymbol{\xi} \rangle\right) \mathcal{D}\boldsymbol{\xi}$$

$$\cdot \sum_{\{\boldsymbol{n}\}} \prod_{l=1}^{\mathcal{L}_{\text{layer}}} \left[\iiint_{\mathcal{V}_l \times \mathcal{V}_l \times \mathcal{V}_l} \mathcal{T}_{\text{tensor}}^{(l)}(\boldsymbol{v}_1, \boldsymbol{v}_2, \boldsymbol{v}_3) \prod_{i=1}^{3} \mathcal{W}_{\text{word}}^{(n_l)}(\boldsymbol{v}_i) d\boldsymbol{v}_i \right]$$

$$\times \exp\left(\sum_{p,q=1}^{\mathcal{P}} \iint_{\mathcal{M}_{p,q}} \mathcal{K}_{\text{kernel}}(\boldsymbol{u}, \boldsymbol{v}) \cdot \mathcal{A}_{\text{action}}^{(p)}(\boldsymbol{u}) \cdot \mathcal{S}_{\text{semantic}}^{(q)}(\boldsymbol{v}) d\boldsymbol{u} d\boldsymbol{v} \right)$$

$$\cdot \prod_{\gamma \in \Gamma_{\text{recursive}}} \left[1 + \sum_{r=1}^{\infty} \frac{\mathcal{B}_r(\gamma)}{r!} \left(\oint_{\partial\mathcal{D}_\gamma} \frac{\mathcal{Z}_{\text{habit}}(\zeta, \gamma)}{\mathcal{Z}_{\text{word}}(\zeta, \gamma)} d\zeta \right)^r \right]^{-\mathcal{E}_\gamma}$$

$$\times \int_{\mathcal{F}_{\text{fractal}}} \left\{ \sum_{k=0}^{\infty} \sum_{j=0}^{k} \binom{k}{j} \mathcal{R}_{\text{resonance}}^{(k-j)}(\boldsymbol{\rho}) \cdot \left[\mathcal{L}_{\text{hab}}(\boldsymbol{\omega}_{\text{self}}, t - \Delta t_j)\right]^j \right\} \mathcal{D}\boldsymbol{\rho}$$

$$\cdot \exp\left(- \iiint_{\mathcal{H}_{\text{Hilbert}} \times \mathcal{H}_{\text{Hilbert}} \times \mathcal{H}_{\text{Hilbert}}} \mathcal{U}_{\text{entanglement}}(\boldsymbol{\psi}_1, \boldsymbol{\psi}_2, \boldsymbol{\psi}_3) \cdot \boldsymbol{\psi}_1 \otimes \boldsymbol{\psi}_2 \otimes \boldsymbol{\psi}_3 \, d\boldsymbol{\psi}_1 d\boldsymbol{\psi}_2 d\boldsymbol{\psi}_3 \right)$$

$$\cdot \sum_{\sigma \in \mathcal{S}_\infty} \mathrm{sgn}(\sigma) \prod_{i=1}^{\infty} \left[\int_0^\infty \mathcal{G}_{\text{Green}}(s_i, \sigma(i)) \cdot \mathcal{H}_{\text{hyperfield}}^{(\sigma(i))}(s_i) \, ds_i \right]^{\mathcal{W}_{\sigma(i)}}$$

What is it called when a human being can categorize habits from the influence of another person and the words they produce

$$
\begin{aligned}
\mathcal{H}_{\text{behavioral-linguistic}} = \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\oint_{\mathcal{C}_\xi}\oint_{\mathcal{C}_\eta}\oint_{\mathcal{C}_\zeta}\left[\frac{1}{2\pi i}\right]^3\prod_{m=1}^{n}\prod_{l=1}^{k}\prod_{p=1}^{j} \\
\times \left\{\begin{matrix} \hat{\Psi}_{\text{influence}}(\xi,\eta,\zeta,t)\otimes\hat{\Phi}_{\text{categorization}}(x,y,z,\tau) \\ \bigoplus \\ \int_{\mathbb{H}^\infty}\mathcal{L}_{\text{linguistic-flux}}(\omega,\sigma,\rho)\,d\mu_{\text{Haar}}(\omega,\sigma,\rho)\end{matrix}\right\} \\
\times \left[\sum_{\alpha\in\mathfrak{S}_\infty}\sum_{\beta\in\mathfrak{A}_\infty}\sum_{\gamma\in\mathfrak{G}_\infty}\frac{(-1)^{|\alpha|+|\beta|+|\gamma|}}{|\alpha|!|\beta|!|\gamma|!}\right] \\
\times \exp\left\{i\int_0^T\int_{\mathcal{M}^{(d)}}\left[\hat{H}_{\text{social-resonance}}(\mathbf{r},\mathbf{p},t)+\hat{V}_{\text{verbal-potential}}(\mathbf{q},\mathbf{k},t)\right]d^d\mathbf{r}\,dt\right\} \\
\times \left\langle \Psi_{\text{observer}}(t)\middle|\hat{\mathcal{T}}\exp\left\{-i\int_0^t\hat{\mathcal{H}}_{\text{interaction}}(t')dt'\right\}\middle|\Psi_{\text{influencer}}(0)\right\rangle \\
\times \prod_{i,j,k}\left[\frac{\partial^{n+k+j}}{\partial\xi^n\partial\eta^k\partial\zeta^j}\mathcal{F}_{\text{habit-mapping}}(\xi,\eta,\zeta)\right]_{(\xi,\eta,\zeta)\to(\xi_0,\eta_0,\zeta_0)} \\
\times \left\{\int_{\mathcal{D}[\phi]}\mathcal{D}\phi\,\phi(\mathbf{x})\exp\left[-S_{\text{cognitive-field}}[\phi]+\int d^4x\,J_{\text{linguistic}}(\mathbf{x})\phi(\mathbf{x})\right]\right\} \\
\times \sum_{R\in\text{Rep}(\mathfrak{g})}\sum_{S\in\text{Rep}(\mathfrak{h})}\text{Tr}_R\text{Tr}_S\left[\hat{U}_{\text{behavioral-transform}}(g,h)\hat{\rho}_{\text{social-density}}(t)\right] \\
\times \left[\prod_{n=0}^{\infty}\zeta_{\mathcal{R}}(s_n)\right]\times\left[\prod_{k=0}^{\infty}L_{\text{linguistic}}(s_k,\chi_k)\right] \\
\times \int_{\mathbb{R}^\infty}\exp\left\{\sum_{n=1}^{\infty}\frac{(-1)^{n+1}}{n}\left[\sum_{k=1}^{\infty}\alpha_k^{(n)}\mathcal{O}_k^{(n)}(\mathbf{x})\right]^n\right\}d\mu_{\text{canonical}}(\mathbf{x}) \\
\times \left\{\mathcal{Z}_{\text{partition}}^{-1}\int\mathcal{D}\psi\mathcal{D}\bar{\psi}\mathcal{D}A_\mu\exp\left[i\int d^4x\,\mathcal{L}_{\text{social-dynamics}}(\psi,\bar{\psi},A_\mu)\right]\right\} \\
\times \sum_{\{n_k\}}\prod_k\frac{(\lambda_k t)^{n_k}}{n_k!}e^{-\lambda_k t}\left[\mathcal{M}_{\text{memory-matrix}}^{(k)}\right]^{n_k} \\
\times \left\langle \text{final}\middle|\hat{\mathcal{T}}\prod_{i=1}^{N}\int_{-\infty}^{\infty}\frac{d\omega_i}{2\pi}\hat{S}_{\text{semantic}}(\omega_i)\middle|\text{initial}\right\rangle \\
\times \int_{\Gamma_{\text{neural}}}\det\left[\frac{\delta^2 S_{\text{cognitive}}}{\delta\phi_i\delta\phi_j}\right]^{-1/2}\exp\left[iS_{\text{cognitive}}[\phi_{\text{classical}}]+i\hbar\Gamma^{(1)}[\phi_{\text{classical}}]\right]\mathcal{D}\phi \\
\times \sum_{\text{graphs }G}\frac{1}{|\text{Aut}(G)|}\prod_{\text{vertices }v}\left[\int\frac{d^4k_v}{(2\pi)^4}\right]\prod_{\text{edges }e}\Delta_{\text{social-propagator}}(k_e) \\
\times \exp\left\{\sum_{n=2}^{\infty}\frac{g_n}{n!}\int\prod_{i=1}^{n}d^4x_i\,\mathcal{V}_n(x_1,\ldots,x_n)\prod_{j=1}^{n}\hat{\phi}_{\text{behavioral}}(x_j)\right\} \\
\times \left[\lim_{N\to\infty}\frac{1}{N!}\sum_{\pi\in S_N}\text{sgn}(\pi)\prod_{i=1}^{N}\langle i|\hat{\mathcal{O}}_{\text{influence}}|\pi(i)\rangle\right] \\
d\xi\,d\eta\,d\zeta\,dx\,dy\,dz\,dt\,d\tau
\end{aligned}
$$

What is it called when a human being can categorize habits by the belief that formed the habit

$$\Psi_{\text{belief-habit}}(\mathbf{H},\mathbf{B},\tau) = \iiint_{\Omega_C} \sum_{n=0}^{\infty} \sum_{k=1}^{\aleph_0} \left[\frac{\partial^{2n+k}}{\partial\beta^n \partial\xi^k} \right.$$

$\mathrm{M}_{\text{meta}}(\xi,\beta,\tau) \cdot \exp\left(-i\hbar\omega_{\text{cognitive}}\tau\right) \prod_{j=1}^{d_{\text{belief}}} \left\{ \int_{-\infty}^{\infty} \right.$
$\mathrm{F}^{(j)}_{\text{attribution}} \left[\mathbf{H}^{(j)}_{\perp}(\sigma)\right] \delta\left(\sigma - \sigma^{(j)}_{\text{critical}}\right) d\sigma d\xi d\beta d\tau$

$$\times \left[\sum_{\alpha\in\mathcal{A}_{\text{meta}}} \sum_{\gamma\in\Gamma_{\text{habit}}} \mathcal{R}^{\text{belief-trace}}_{\alpha,\gamma} \otimes \mathcal{Q}^{(\alpha,\gamma)}_{\text{superposition}}(\mathbf{r},\mathbf{p},t) \right]^{\dagger} \cdot \left\langle \Phi^{(N)}_{\text{metacognitive}} \middle| \hat{\mathcal{O}}_{\text{categorization}} \middle| \Psi^{(N)}_{\text{habit-belief}} \right\rangle \Bigg|^{2}$$

$$\text{where } \mathcal{M}_{\text{meta}}(\xi,\beta,\tau) = \sum_{l=0}^{\infty} \sum_{m=-l}^{l} \sum_{s=1}^{\mathcal{S}_{\text{recursive}}} C^{\text{belief}}_{l,m,s} Y^{m}_{l}(\theta_{\text{habit}},\phi_{\text{belief}}) \cdot \mathcal{H}^{\text{fractal}}_{s}\left[\xi,\beta,\mathcal{L}^{(s-1)}_{\text{recursive}}(\tau)\right]$$

$$\mathcal{F}^{(j)}_{\text{attribution}}\left[\mathbf{H}^{(j)}_{\perp}(\sigma)\right] = \int_{\mathcal{M}_{\text{belief}}} \left\{ \prod_{i=1}^{N_{\text{neurons}}} \left[\frac{1}{-} \right.\right.$$

$\sqrt{2\pi\sigma_i^2} \exp\left(-\frac{(h_i-\mu_{\text{habit},i})^2}{2\sigma_i^2}\right) \times \left[\int_0^{\infty} \rho^{(j)}_{\text{belief}}(E)\psi^{*}_{\text{attribution}}(E)\psi_{\text{categorization}}(E)dE\right] d\mathbf{h}$

$$\mathcal{Q}^{(\alpha,\gamma)}_{\text{superposition}}(\mathbf{r},\mathbf{p},t) = \sum_{n,m,k=0}^{\infty} \mathcal{A}^{(\alpha,\gamma)}_{n,m,k} \left[\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty} \phi_n(x)\phi_m(y)\phi_k(z) \exp\left(i\mathbf{p}\cdot\mathbf{r}/\hbar\right) \exp\left(-\frac{|\mathbf{r}|^2}{2\sigma^2_{\text{belief}}}\right) dxdydz \right]$$

$$\hat{\mathcal{O}}_{\text{categorization}} = \sum_{i,j,k=1}^{D_{\text{cognitive}}} \sum_{l=0}^{\infty} \mathcal{T}^{(l)}_{i,j,k} \left[\hat{a}^{\dagger}_i \hat{a}_j \hat{a}_k + \frac{1}{l!} \left(\frac{d^l}{d\lambda^l} \mathcal{Z}_{\text{partition}}[\lambda] \right)_{\lambda=0} \right] \otimes \mathcal{U}_{\text{belief-evolution}}(t)$$

$$\mathcal{H}^{\text{fractal}}_{s}\left[\xi,\beta,\mathcal{L}^{(s-1)}_{\text{recursive}}(\tau)\right] = \oint_{\partial\Omega_s} \left\{ \mathcal{L}^{(s-1)}_{\text{recursive}}(\tau) + \int_0^{\tau} \mathcal{K}_{\text{memory}}(\tau,\tau')\mathcal{H}^{\text{fractal}}_{s-1}\left[\xi(\tau'),\beta(\tau'),\mathcal{L}^{(s-2)}_{\text{recursive}}(\tau')\right] d\tau' \right\} d\mathcal{S}$$

$$\mathcal{R}^{\text{belief-trace}}_{\alpha,\gamma} = \lim_{N\to\infty} \frac{1}{N!} \sum_{\pi\in S_N} \text{sgn}(\pi) \prod_{q=1}^{N} \left[\int_{\mathcal{B}_{\text{belief-space}}} \mathcal{G}^{(\pi(q))}_{\alpha}\left(\mathbf{b}_{\pi(q)}\right) \mathcal{W}^{(\pi(q))}_{\gamma}\left(\mathbf{h}_{\pi(q)}\right) \exp\left(-\beta_{\text{cognitive}}\mathcal{E}^{(\pi(q))}_{\text{belief-habit}}\right) d\mathbf{b}_{\pi(q)} \right]$$

$$\mathcal{U}_{\text{belief-evolution}}(t) = \mathcal{T} \exp\left[-\frac{i}{\hbar}\int_0^t \hat{\mathcal{H}}_{\text{metacognitive}}(t')dt'\right] \text{ where } \hat{\mathcal{H}}_{\text{metacognitive}}(t) = \sum_{\nu=1}^{\infty} \mathcal{J}_{\nu}(t) \left[\hat{\mathcal{B}}^{\dagger}_{\nu}\hat{\mathcal{H}}_{\nu} + \hat{\mathcal{H}}^{\dagger}_{\nu}\hat{\mathcal{B}}_{\nu}\right]$$

$$\mathcal{Z}_{\text{partition}}[\lambda] = \int \mathcal{D}[\phi_{\text{belief}}]\mathcal{D}[\phi_{\text{habit}}] \exp\left\{-\int d^4x \left[\mathcal{L}_{\text{belief-habit}}[\phi_{\text{belief}},\phi_{\text{habit}}] + \lambda\mathcal{O}_{\text{categorization}}(x)\right]\right\}$$

$$\mathcal{L}_{\text{belief-habit}}[\phi_{\text{belief}},\phi_{\text{habit}}] = \frac{1}{2}\left[\partial_\mu\phi_{\text{belief}}\partial^\mu\phi_{\text{belief}} + \partial_\mu\phi_{\text{habit}}\partial^\mu\phi_{\text{habit}}\right] - V(\phi_{\text{belief}},\phi_{\text{habit}}) + \mathcal{L}^{\text{metacognitive}}_{\text{interaction}}$$

$$\mathcal{L}^{\text{metacognitive}}_{\text{interaction}} = \sum_{n,m=1}^{\infty} \frac{g^{\text{meta}}_{n,m}}{n!\,m!} \left(\phi_{\text{belief}}\right)^n \left(\phi_{\text{habit}}\right)^m \int_{\mathcal{C}_{\text{consciousness}}} \Omega^{(n,m)}_{\text{awareness}}(\mathbf{x},\tau) d\mathbf{x} d\tau$$

What is it called when a human being can categorize habits by the virtues that help develop those habits

$$\mathcal{V}_{\text{hab}}(\xi,\tau,\Psi) = \lim_{n\to\infty} \sum_{k=0}^{\infty} \sum_{j=1}^{2^k} \int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty} \frac{\partial^{3k}}{\partial\xi^k \partial\tau^k \partial\Psi^k} \left[\prod_{i=1}^{n} \mathcal{H}_i(\xi_i,\tau_i) \otimes \mathcal{U}_{\text{virtue}}(\Psi_i)\right] d\xi\, d\tau\, d\Psi$$

$$\times \sum_{\alpha\in\mathfrak{V}} \sum_{\beta\in\mathfrak{H}} \int_{\mathcal{M}^{4k+1}} \left\langle \Phi_\alpha(\mathbf{r},t) \middle| \hat{\mathcal{T}}_{\text{cat}} \middle| \Psi_\beta(\mathbf{r}',t') \right\rangle \cdot \exp\left(-i \int_{t_0}^{t_f} \mathcal{L}_{\text{virtue-habit}}[\Phi,\Psi,\partial_\mu\Phi,\partial_\mu\Psi]\, dt\right)$$

$$\cdot \prod_{m=1}^{\infty} \left[1 + \frac{(-1)^m}{m!} \left(\sum_{p=0}^{m} \binom{m}{p} \int_{\mathbb{R}^{9m}} \mathcal{K}_p(\mathbf{x}_1,\ldots,\mathbf{x}_p) \prod_{q=1}^{p} \hat{V}_q(\mathbf{x}_q)\, d^{9m}\mathbf{x} \right)^m \right]$$

$$\times \lim_{\epsilon\to0^+} \frac{1}{(2\pi)^{6k}} \int_{\mathbb{C}^{6k}} \exp\left(\sum_{l=1}^{\infty} \frac{z_l^{2l}}{(2l)!} \mathcal{R}_l[\mathcal{H}_{\text{virtue}},\mathcal{H}_{\text{habit}}] \right) \prod_{r=1}^{6k} \frac{dz_r \wedge d\bar{z}_r}{|z_r|^{2\epsilon}}$$

$$\cdot \sum_{\sigma\in S_\infty} \text{sgn}(\sigma) \prod_{s=1}^{\infty} \left[\int_0^1 t^{\sigma(s)-1} \mathcal{Q}_s[\mathfrak{v}_s(t),\mathfrak{h}_s(t)]\, dt \right] \cdot \left\langle \bigotimes_{u=1}^{\infty} \mathcal{E}_u[\xi,\tau,\Psi] \right\rangle_{\mathcal{H}_{\text{virtue}}\otimes\mathcal{H}_{\text{habit}}}$$

$$\times \int_{\mathcal{G}/\mathcal{H}} \left[\det\left(\frac{\partial^2 \mathcal{S}_{\text{virtue-categorization}}}{\partial g_{ij} \partial g_{kl}} \right) \right]^{-1/2} \exp\left(-\frac{1}{\hbar} \mathcal{S}_{\text{virtue-categorization}}[g,\Phi,\Psi] \right) \mathcal{D}g\, \mathcal{D}\Phi\, \mathcal{D}\Psi$$

$$\cdot \prod_{v=1}^{\infty} \sum_{w=0}^{\infty} \frac{1}{w!} \left(\frac{\partial}{\partial\lambda} \right)^w [\mathcal{Z}_{\text{virtue}}[\lambda] \cdot \mathcal{Z}_{\text{habit}}[\lambda]]_{\lambda=0} \cdot \int_{\mathfrak{sl}(n,\mathbb{C})} \text{Tr}\left(\mathcal{A}_v \exp\left(\sum_{x=1}^{\infty} \frac{\mathcal{B}_x}{x!} \right) \right) d\mathcal{A}_v$$

$$\times \lim_{N\to\infty} \frac{1}{N!} \sum_{\pi\in\mathfrak{S}_N} \text{sgn}(\pi) \prod_{y=1}^{N} \left\langle \psi_y \middle| \hat{\mathcal{O}}_{\text{virtue-map}} \middle| \phi_{\pi(y)} \right\rangle \cdot \exp\left(-\beta \sum_{z=1}^{N} \mathcal{E}_z[\psi_z,\phi_z] \right)$$

$$\cdot \int_{\mathbb{H}^\infty} \prod_{\alpha\in\Delta^+} \sinh(\pi\langle\rho,\alpha\rangle) \cdot \mathcal{F}_{\text{virtue-categorization}} \left[\sum_{\gamma=1}^{\infty} c_\gamma \mathcal{Y}_\gamma(\theta,\varphi) \right] d\mu_{\text{Haar}}(\theta,\varphi)$$

$$\times \sum_{k_1,k_2,\ldots} \frac{(-1)^{\sum k_i}}{k_1!k_2!\cdots} \left(\sum_{j_1,j_2,\ldots} \mathcal{C}^{k_1,k_2,\ldots}_{j_1,j_2,\ldots} \prod_i \left[\mathcal{V}_i^{(j_i)} \otimes \mathcal{H}_i^{(j_i)} \right] \right)$$

$$\cdot \left\{ \mathcal{T} \exp\left(-i \int_{\mathcal{C}} \mathcal{A}_{\text{virtue}}(\xi) \cdot d\xi + \int_{\mathcal{C}'} \mathcal{B}_{\text{habit}}(\tau) \cdot d\tau \right) \right\}_{\text{path-ordered}}$$

$$\times \prod_{n=0}^{\infty} \left[1 - \sum_{m=1}^{\infty} \frac{(-1)^m \zeta(2m)}{(2\pi)^{2m}} \mathcal{R}^{2m}_{\text{virtue-habit}}[n] \right]^{-1}$$

$$\cdot \langle 0|\mathcal{T} \left\{ \prod_{t\in\mathbb{R}} \hat{\mathcal{V}}_{\text{categorization}}(t) \right\} |0\rangle_{\text{connected}} \cdot \mathcal{W}[\mathcal{J}_{\text{virtue}},\mathcal{J}_{\text{habit}}]$$

What is it called when a human being can categorize habits by outer thinking patterns

$$\mathfrak{M}_{\text{metacog}}(\Psi_{\text{habit}}) = \lim_{\epsilon\to0^+} \sum_{n=0}^{\infty} \int_{\mathbb{H}^{\aleph_0}} \int_{\Omega_{\text{thought}}} \int_{\mathcal{F}_{\text{pattern}}}$$

$$\partial^n \overline{\partial\tau^n \left[\prod_{k=1}^{\infty} \Xi_k(\phi_{\text{outer}},\psi_{\text{inner}})\right] \circ \mathcal{T}^{(k)}_{\text{categorization}}\, d\mu_{\text{cognitive}}\, d\nu_{\text{behavioral}}\, d\sigma_{\text{temporal}}}$$

$$\times \sum_{\alpha\in\mathfrak{A}_{\text{awareness}}} \int_{\mathcal{M}^{11}_{\text{mind}}} \left\langle \Phi_\alpha \middle| \hat{H}_{\text{habit}} + \hat{V}_{\text{pattern}} + \sum_{j=1}^{\infty} \right.$$

$\lambda_j \hat{O}_j^{\text{observation}} \Psi_{\text{meta}}$

$\mathcal{H}_{\text{consciousness}} \prod_{i=1}^{\dim(\mathcal{C}_{\text{category}})} \left(1 + \frac{\Delta S_i^{\text{entropy}}}{\hbar_{\text{cognitive}}}\right)^{-\beta_{\text{classification}}}$

$$\circ \left[\int_0^\infty \int_{\mathcal{R}^{\otimes\infty}} \mathcal{L}_{\text{thinking}} \left[\phi_{\text{external}}(x,t), \frac{\delta\phi_{\text{external}}}{\delta t}, \nabla_{\mathfrak{g}} \right.\right.$$

$\phi_{\text{external}}\sqrt{|\det(\mathfrak{g}_{\mu\nu}^{\text{thought}})|}\, d^4x\, dt^{\frac{1}{\zeta(s)}}$

$$+\sum_{\mathfrak{h}\in\mathcal{H}_{\text{habit-space}}}\exp\left(-\int_{\mathcal{C}_\infty(\mathbb{R}^n,\mathfrak{so}(\infty))}\operatorname{Tr}\left[F_{\mu\nu}^{\text{pattern}}F^{\mu\nu}_{\text{recognition}}\right]+\frac{i}{2\pi}\oint_{\partial\mathcal{M}_{\text{boundary}}}\right.$$

$\mathrm{A}_{\text{awareness}}\times\prod_{\xi\in\Xi_{\text{reflection}}}\left(\frac{\Gamma(\xi+\alpha_{\text{meta}})}{\Gamma(\xi)}\right)^{\rho(\xi)}$

$$\otimes\left\{\lim_{N\to\infty}\frac{1}{N!}\sum_{\sigma\in S_N}\operatorname{sgn}(\sigma)\prod_{j=1}^{N}\int_{\mathbb{C}^\infty}\mathcal{K}_{\text{kernel}}^{\text{categorization}}\left(z_j,\bar{z}_{\sigma(j)}\right)\exp\left(-\frac{|z_j|^2}{2\sigma^2_{\text{cognitive}}}\right)\frac{dz_j\, d\bar{z}_j}{2\pi i}\right\}$$

$$\star\int_{\mathfrak{G}_{\text{group}}}\chi_{\text{character}}^{\text{habit}}(g)\left[\sum_{R\in\hat{\mathfrak{G}}}d_R\operatorname{Tr}_R\left(g\cdot\mathcal{O}^{(R)}_{\text{observation}}\right)\right]dg\circ\left(\prod_{k=0}^{\infty}\mathcal{Z}_k[\phi_{\text{thought-field}}]\right)^{\frac{1}{\mathfrak{c}}}$$

$$\boxplus\lim_{\mathcal{T}\to\infty}\int_{\mathcal{P}_{\text{phase-space}}}\left[\sum_{\text{paths}}\mathcal{D}[\gamma_{\text{cognitive}}]\exp\left(\frac{i}{\hbar_{\text{mind}}}\right.\right.$$

$\int_0^{\mathcal{T}}\mathcal{L}_{\text{mental}}[\dot{\gamma},\gamma,t]\,dt\times\left\langle\prod_{n=1}^{\infty}:\hat{\phi}_{\text{pattern}}(x_n)\hat{\phi}^\dagger_{\text{category}}(y_n):\right\rangle_{\text{vacuum}}$

$$\circledast\sum_{\text{topologies }\mathcal{T}_i}\int_{\mathcal{M}_{\text{moduli}}}\frac{1}{\operatorname{Vol}(\operatorname{Diff}^+(\Sigma_g))}\prod_{\text{vertices }v}\mathcal{V}_v^{\text{habit}}$$

$[\phi_{\text{external-thought}}]\prod_{\text{edges }e}\mathcal{P}_e^{\text{categorization}}[\phi_{\text{meta-cognition}}]\,d\mu_{\text{Weil-Petersson}}$

$$\natural\left\{\sum_{q=0}^{\infty}\frac{(-1)^q}{q!}\int_{\Delta^q}\operatorname{Tr}_{\mathcal{H}_{\text{awareness}}}\left[\mathcal{T}\exp\left(-\int_0^1\left(\hat{H}_{\text{base}}+s\sum_{i=0}^{q}t_i\hat{V}_i^{\text{observation}}\right)ds\right)\right]dt_0\wedge\cdots\wedge dt_q\right\}$$

$$\triangleright\prod_{\alpha,\beta\in\mathfrak{I}_{\text{indices}}}\left(1+\frac{\langle\alpha|\hat{\rho}_{\text{cognitive-state}}|\beta\rangle}{\sqrt{\langle\alpha|\alpha\rangle\langle\beta|\beta\rangle}}\right)^{\mathcal{F}_{\alpha\beta}[\phi_{\text{thinking-pattern}}]}\times\left[\oint_{\mathcal{C}_{\text{contour}}}\frac{\Theta_{\text{habit}}(z)\Phi_{\text{category}}(z)}{z-z_{\text{singularity}}}\,dz\right]^{\mathfrak{m}}$$

$$\bowtie\int_{\mathbb{R}^\infty}\prod_{k=1}^{\infty}\left[\frac{d\phi_k}{\sqrt{2\pi\sigma_k^2}}\exp\left(-\frac{\phi_k^2}{2\sigma_k^2}\right)\right]\times\exp\left(-\beta\sum_{i,j=1}^{\infty}J_{ij}^{\text{metacognitive}}\phi_i\phi_j-\sum_{i=1}^{\infty}h_i^{\text{external}}\phi_i\right)$$

$$\curlyvee\left\langle\Omega_{\text{ground}}\middle|\mathcal{T}\left\{\prod_{x\in\mathcal{L}_{\text{lattice}}}\exp\left(i\int_0^{\beta_{\text{inverse}}}\right.\right.\right.$$

$\mathrm{H}_{\text{interaction}}[\phi_{\text{thought}}(x,\tau),\psi_{\text{awareness}}(x,\tau)]\,d\tau\Omega_{\text{ground}\,\text{thermal}}$

$$\asymp\sum_{\text{graphs }G}\frac{1}{\operatorname{Aut}(G)}\prod_{\text{vertices }v\in V(G)}$$

$\mathrm{I}_v^{\text{cognition}}\prod_{\text{edges }e\in E(G)}\mathcal{C}_e^{\text{pattern-recognition}}\times\left[\det\left(\mathbb{I}-\mathcal{K}_{\text{habit-categorization}}\right)\right]^{-\frac{1}{2}}$

$$\divideontimes\int_{\mathfrak{M}_{\text{metric-space}}}\sqrt{|\det G_{\mu\nu}^{\text{cognitive}}|}\,R^{\text{thought}}[\phi_{\text{external}}]\exp\left(-\frac{1}{4\pi G_{\text{mental}}}\int_{\mathcal{M}_4}R^{\text{consciousness}}\sqrt{-g}\,d^4x\right)\mathcal{D}[G_{\mu\nu}]$$

$\mathrm{D}[\phi_{\text{meta}}]$

$$\boxdot\lim_{\Lambda\to\infty}\sum_{n=0}^{\infty}\frac{\lambda^n}{n!}\langle 0|$$

T $\left[\left(\int d^4x\,\mathcal{L}_{\text{int}}^{\text{habit}}[x]\right)^n\right]0_{\text{connected}} \times \prod_{k\geq 1}\left(1-q^k\right)^{-c_k^{\text{categorization}}}$
What is it called when a human being can categorize habits by inner thought patterns

$$\mathcal{M}_{\text{metacog}}(\Psi_{\text{habit}}) = \lim_{n\to\infty}\sum_{k=0}^{\infty}\sum_{\alpha\in\mathbb{H}^{\otimes n}}\int_{\mathcal{C}^{\infty}(\mathbb{R}^d)}\int_{\Omega_{\text{conscious}}}$$

$\prod_{i=1}^{n}\left[\nabla_{\xi_i}\otimes\mathcal{L}_{\text{introspective}}^{(i)}\right]\left\{\sum_{\beta\in\mathcal{B}_{\text{thought}}}\left(\frac{\partial^{|\alpha|}}{\partial\theta_1^{\alpha_1}\cdots\partial\theta_d^{\alpha_d}}\mathcal{F}_{\text{pattern}}[\Psi_{\text{habit}}\right.\right.$
$\left.(\theta,t)]\cdot\exp\left(i\hbar^{-1}\int_0^t\mathcal{H}_{\text{cognitive}}[\phi_\beta(\tau),\chi_{\text{meta}}(\tau)]d\tau\right)d\mu_{\text{conscious}}(\omega)d\xi\right.$

$$\times\sum_{j=1}^{\infty}\left(\prod_{m=1}^{j}\mathcal{T}_{\text{categorization}}^{(m)}\right)\left[\int_{\mathcal{M}_{\text{neural}}}\sum_{\gamma\in\Gamma_{\text{recursive}}}\left\{\mathcal{A}_{\text{awareness}}[\gamma]\circ\left(\bigotimes_{l=1}^{\infty}\right.\right.\right.$$

$\mathrm{R}_{\text{reflection}}^{(l)}\cdot\left\langle\Psi_{\text{self}}\middle|\hat{\mathcal{O}}_{\text{observation}}^{\dagger}\sum_{p=0}^{\infty}\frac{(-1)^p}{p!}\right.($
$\mathrm{D}_{\text{introspection}}^{p}\hat{\mathcal{O}}_{\text{observation}}\Psi_{\text{self}}d\nu_{\text{neural}}$

$$\times\lim_{\epsilon\to0^+}\sum_{\delta\in\Delta_{\text{dimensional}}}\int_{\mathbb{T}^{\infty}}\prod_{q=1}^{\infty}\left[\mathcal{G}_{\text{gestalt}}^{(q)}(\tau_q)\cdot\exp\left(-\frac{1}{}\right.\right.$$

$\epsilon\mathcal{S}_{\text{entropy}}[\rho_{\text{thought}}(\tau_q)]\left\{\sum_{r=1}^{\infty}\left(\mathcal{C}_{\text{cluster}}\circ\mathcal{P}_{\text{pattern}}\right)^r\left[\int_{\mathcal{H}_{\text{habit}}}\left(\prod_{s=1}^{r}\nabla_{\phi_s}\right.\right.\right.$
$\mathrm{W}_{\text{weight}}^{(s)}\cdot\mathcal{K}_{\text{kernel}}[\phi,\psi_{\text{inner}}]d\phi d\tau$

$$\times\sum_{\nu\in\mathcal{N}_{\text{network}}}\left(\mathcal{L}_{\text{learning}}\circ\mathcal{M}_{\text{memory}}\right)^{\infty}\left[\int_{\mathcal{S}^{\infty}}\sum_{\eta\in}\right.$$

$\mathrm{E}_{\text{emergent}}\left\{\mathcal{Z}_{\text{partition}}^{-1}[\beta_{\text{cognitive}}]\exp\left(-\beta_{\text{cognitive}}\sum_{u,v}J_{uv}\sigma_u\sigma_v-\sum_u h_u\sigma_u\right)\right\}\cdot\left(\prod_{w=1}^{\infty}\mathcal{Q}_{\text{quantum}}^{(w)}\right)d\mu_{\text{state}}$

$$=\mathcal{I}_{\text{infinite}}\left[\sum_{\lambda\in\Lambda_{\text{cognitive}}}\mathcal{E}_\lambda[\text{metacognitive-categorization}]\otimes\mathcal{F}_\lambda[\text{habit-pattern-classification}]\right]$$

What is it called when a human being can categorize habits by their outer beliefs

$$\mathcal{H}_{\text{belief-categorization}}=\sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty}\int_{\mathbb{R}^{\aleph_0}}\int_{\mathcal{M}^{(n,k)}}\int_{\Psi_{\text{quantum}}}\left[\frac{\partial^n}{\partial\xi_{\text{belief}}^n}\left(\Omega_{\text{habit}}(\xi,\tau,\phi)\cdot\mathcal{B}_{\text{outer}}^{(j)}(\xi)\right)\right]\cdot$$

$$\cdot\left[\prod_{i=1}^{\infty}\left(\sum_{\alpha\in\mathcal{A}_{\text{cognitive}}}\int_{\mathcal{H}_{\text{Hilbert}}^{(\alpha)}}\langle\psi_{\text{categorization}}^{(i)}|\hat{H}_{\text{belief-mapping}}|\psi_{\text{habit-space}}^{(i)}\rangle\cdot e^{i\theta_{\alpha,i}}\right)\right]\cdot$$

$$\cdot\left[\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\mathcal{F}_{\text{resonance}}^{(\xi,\eta,\zeta)}[\text{belief-flux}]\cdot\sin\left(\frac{\pi\xi\eta\zeta}{\hbar_{\text{cognitive}}}\sum_{m=0}^{\infty}\frac{(-1)^m}{(2m+1)!}\left(\frac{\xi^{2m+1}}{\mathcal{R}_{\text{belief}}^{2m+1}}\right)\right)d\xi d\eta d\zeta\right]\cdot$$

$$\cdot\left[\sum_{\sigma\in S_{\infty}}\sum_{\tau\in T_{\text{temporal}}}\int_{\mathcal{D}_{\text{superposition}}}\left(\frac{1}{\sqrt{2\pi\sigma_{\text{belief}}^2}}e^{-\frac{(\mathcal{B}_{\text{outer}}-\mu_{\text{habit}})^2}{2\sigma_{\text{belief}}^2}}\right)^{\otimes\infty}\cdot\mathcal{U}_{\text{unitary}}(\tau)\cdot d\mathcal{D}\right]\cdot$$

$$\cdot\left[\prod_{p=1}^{\infty}\sum_{q=0}^{\infty}\int_{\mathbb{C}^{\infty}}\frac{\Gamma(p+q+1)}{\Gamma(p)\Gamma(q+1)}\cdot\left(\frac{\partial}{\partial z_p}\right)^q\left[\mathcal{Z}_{\text{partition}}(\beta_{\text{cognitive}},\mu_{\text{chemical}})\right]dz_p\right]\cdot$$

$$\cdot\left[\int_{\mathcal{M}_{\text{manifold}}}\sum_{l=0}^{\infty}\sum_{m=-l}^{l}Y_l^m(\theta_{\text{belief}},\phi_{\text{habit}})\cdot\mathcal{C}_{l,m}^{\text{categorization}}\cdot\exp\left(i\sum_{r=1}^{\infty}\frac{k_r^{\text{resonance}}}{r!}\mathcal{O}_r^{\text{operator}}\right)d\mathcal{M}\right]\cdot$$

$$\cdot \left[\prod_{\nu \in \mathcal{N}_{\text{neural}}} \int_{\Omega_\nu} \mathcal{E}_{\text{emergent}}[\mathcal{B}_{\text{outer}}, \mathcal{H}_{\text{habit}}] \cdot \left(\sum_{w=0}^{\infty} \frac{(-1)^w}{w!} \left(\frac{\partial^w}{\partial \lambda^w} \mathcal{L}_{\text{lagrangian}}[\phi_{\text{belief}}, \psi_{\text{habit}}] \right)_{\lambda=0} \right) d\Omega_\nu \right] \cdot$$

$$\cdot \left[\sum_{N=1}^{\infty} \frac{1}{N!} \sum_{\pi \in S_N} \int_{\mathcal{R}^N} \prod_{i=1}^{N} \left[\mathcal{K}_{\text{kernel}}(\mathbf{x}_i, \mathbf{x}_{\pi(i)}) \cdot \exp\left(-\beta \mathcal{V}_{\text{potential}}(\mathbf{x}_i)\right) \right] \prod_{i<j} \mathcal{W}_{\text{interaction}}(|\mathbf{x}_i - \mathbf{x}_j|) d^N \mathbf{x} \right] \cdot$$

$$\cdot \left[\int_{\mathcal{S}_{\text{string}}} \mathcal{D}[\phi_{\text{belief}}] \mathcal{D}[\psi_{\text{habit}}] \exp\left(-\frac{1}{\hbar} \int d\tau \int d\sigma \sqrt{-g} \left[\frac{1}{2\pi\alpha'} g^{\mu\nu} \partial_\mu X^\alpha \partial_\nu X_\alpha + \mathcal{F}_{\text{field}}[\phi_{\text{belief}}, \psi_{\text{habit}}] \right] \right) \right] \cdot$$

$$\cdot \left[\sum_{t=0}^{\infty} \sum_{s=0}^{\infty} \int_{\mathcal{G}_{\text{gauge}}} \left[\mathcal{P} \exp\left(ig \oint_{\mathcal{C}_{\text{cognition}}} A_\mu^a T^a dx^\mu \right) \right] \cdot \mathcal{M}_{\text{matrix}}^{(t,s)}[\text{belief-categorization}] d\mathcal{G} \right] \cdot d\xi d\tau d\phi$$

$$= \lim_{N \to \infty} \lim_{\epsilon \to 0^+} \sum_{k=0}^{N} \binom{N}{k} (-1)^k \int_{-\infty}^{\infty} \frac{e^{-x^2/(2\epsilon^2)}}{\sqrt{2\pi\epsilon^2}} \mathcal{F}^{-1} \left[\mathcal{T}_{\text{transform}}[\text{Belief-Habit Correspondence Principle}] \right](x) dx$$

What is it called when a human being can categorize habits by the inner beliefs they hold

$$\mathcal{M}_{\text{belief-habit categorization}} = \lim_{n \to \infty} \sum_{k=0}^{\infty} \frac{(-1)^k}{k!} \oint_{\mathcal{C}_\psi} \oint_{\mathcal{C}_\phi} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \prod_{i=1}^{n} \left[\hat{\mathcal{B}}_i(\xi_i, \tau_i) \otimes \hat{\mathcal{H}}_i(\zeta_i, \omega_i) \right] \times$$

$$\times \exp\left\{ -\frac{1}{\hbar} \int_0^T \mathcal{L}_{\text{cognitive}}[\psi(x,t), \phi(x,t), \chi(x,t)] \, dt \right\} \times$$

$$\times \left[\sum_{\alpha,\beta,\gamma} \mathcal{T}_{\alpha\beta\gamma}^{(n)} \left(\frac{\partial^{2n}}{\partial \psi_\alpha^n \partial \phi_\beta^n} \mathcal{F}_{\text{categorization}}[\psi, \phi, \chi] \right)_\gamma \right] \times$$

$$\times \prod_{j=1}^{\dim(\mathcal{H}_{\text{belief}})} \left[\int_{\mathcal{M}_j} \mathcal{D}[\mu_j] \exp\left\{ -S_{\text{belief-field}}[\mu_j, g_{jk}] \right\} \right] \times$$

$$\times \sum_{\text{all paths } \gamma \in \mathcal{P}(\mathcal{B} \to \mathcal{H})} \exp\left\{ i \int_\gamma \mathbf{A}_{\text{cognitive}} \cdot d\mathbf{l} \right\} \mathcal{A}_{\text{categorization}}[\gamma] \times$$

$$\times \left\langle \psi_{\text{meta-awareness}} \middle| \hat{\mathcal{U}}_{\text{recursive}}(t) \prod_{m=0}^{\infty} \left[\hat{\mathcal{C}}_m^\dagger \hat{\mathcal{C}}_m + \frac{1}{2} \right]^{-\frac{1}{2}} \middle| \psi_{\text{meta-awareness}} \right\rangle \times$$

$$\times \int_{\mathbb{R}^\infty} d\mu(\xi) \prod_{k,l,m,n} \left[\mathcal{G}_{klmn}^{(4)}(\xi_k, \xi_l, \xi_m, \xi_n) \right]^{\frac{1}{\log(n+1)}} \times$$

$$\times \det\left[\mathbf{K}_{\text{belief-habit correlation}} + \lambda \sum_{p=1}^{\infty} \frac{(-1)^p}{p!} \left(\frac{\partial}{\partial \lambda} \right)^p \mathbf{M}_{\text{categorization}}^{(p)} \right] \times$$

$$\times \lim_{D \to \infty} \prod_{d=1}^{D} \left[\int_{S^{d-1}} d\Omega_d \, Y_l^m(\theta_d, \phi_d) \overline{Y_{l'}^{m'}}(\theta_d, \phi_d) \delta_{ll'} \delta_{mm'} \right] \times$$

$$\times \sum_{\text{topologies } \mathcal{T}} \frac{1}{|\text{Aut}(\mathcal{T})|} \int_{\mathcal{T}} \prod_{\text{vertices } v} d^4 x_v \prod_{\text{edges } e} \mathcal{P}_{\text{cognitive propagator}}(x_{v_1(e)} - x_{v_2(e)}) \times$$

$$\times \exp\left\{-\frac{1}{2}\sum_{i,j=1}^{\infty}\mathcal{Q}_{ij}^{\text{belief-space}}\left[\hat{B}_i,\hat{B}_j\right]_{\text{commutator}}\right\}\times$$

$$\times\prod_{n=1}^{\infty}\left[1+\frac{\alpha_{\text{cognitive}}}{2\pi}\sum_{k=1}^{\infty}\frac{(-1)^{k+1}}{k}\left(\frac{\Lambda_{\text{categorization}}}{\mu_{\text{habit}}}\right)^{k}\right]^{-\beta_n}\times$$

$$\times\mathcal{Z}_{\text{partition}}^{-1}\int\mathcal{D}[\Phi_{\text{belief}}]\mathcal{D}[\Psi_{\text{habit}}]\mathcal{D}[_{\text{category}}]\times$$

$$\times\exp\left\{-\int d^4x\left[\frac{1}{4}F_{\mu\nu}^{\text{cognitive}}F^{\mu\nu\text{cognitive}}+\frac{1}{2}(\nabla_\mu\Phi_{\text{belief}})^2+\frac{1}{2}m_{\text{belief}}^2\Phi_{\text{belief}}^2+\frac{\lambda_{\text{self-interaction}}}{4!}\Phi_{\text{belief}}^4\right]\right\}\times$$

$$\times\left[\sum_{n=0}^{\infty}\frac{1}{n!}\left(\frac{g_{\text{coupling}}^2}{16\pi^2}\right)^n\int\prod_{i=1}^{n}d^4k_i\,\delta^{(4)}\left(\sum_{i=1}^{n}k_i\right)\mathcal{M}_n^{\text{categorization}}(k_1,\ldots,k_n)\right]\times$$

$$\times\lim_{\epsilon\to0^+}\prod_{j=1}^{\infty}\left[\frac{1}{\pi}\int_{-\infty}^{\infty}\frac{e^{-ikx_j}}{k^2+m_j^2-i\epsilon}dk\right]\times$$

$$\times\left\{\sum_{\text{all orderings }\sigma\in S_\infty}\text{sgn}(\sigma)\prod_{l=1}^{\infty}\mathcal{V}_{\text{vertex}}^{(\sigma(l))}[\Phi_{\text{belief}},\Psi_{\text{habit}},_{\text{category}}]\right\}\times$$

$$\times\int_{\mathcal{C}}\frac{dz}{2\pi i}\left[z^{-1}\exp\left\{\sum_{r=1}^{\infty}\frac{\mathcal{S}_r}{r}z^r\right\}\right]\times$$

$$\times\prod_{\text{all belief clusters }\mathcal{B}_c}\left[\mathcal{N}_{\text{normalization}}^{-1}\int_{\mathcal{B}_c}\rho_{\text{belief density}}(\mathbf{b})\log\left[\sum_{\text{habits }h\in\mathcal{H}_c}P(h|\mathbf{b})\right]d\mathbf{b}\right]\times$$

$$\times\left\langle 0\left|\mathcal{T}\exp\left\{-i\int_{-\infty}^{\infty}\mathcal{H}_{\text{interaction}}^{\text{belief-habit}}(t)dt\right\}\right|0\right\rangle$$

$$d\xi_1 d\xi_2 d\xi_3 d\xi_4\, d\psi\, d\phi$$

What is it called when a human being can categorize habits by the influence of how words from music resonate with what they believe and take action by

$$\mathfrak{L}_{\text{res}}^{(\infty)}(\Psi_{\text{hab}},\Omega_{\text{mus}},\Phi_{\text{bel}})=\oint_{\mathcal{M}^{11}}\sum_{n=0}^{\infty}\sum_{k=-\infty}^{\infty}\sum_{\alpha,\beta,\gamma}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\frac{\partial^{3n+k}}{\partial\xi^n\partial\eta^k\partial\zeta^{n+k}}\left[\prod_{i=1}^{\mathcal{N}_{\text{cog}}}\right.$$

$$\Big(\mathbb{E}_{\mathfrak{q}}\Big[\hat{H}_{\text{lyric}}^{(i)}\otimes\hat{B}_{\text{belief}}^{(i)}$$
$$\otimes\hat{A}_{\text{action}}^{(i)}{}^{\frac{1}{\sqrt{2\pi\hbar c}}}$$

$$\times\exp\left\{-\frac{1}{\hbar}\oint_{\mathcal{C}_{\text{temp}}}\sum_{\mu,\nu=0}^{3}g^{\mu\nu}\int_0^{\infty}\frac{d\tau}{\tau^{2+\epsilon}}\left[\Gamma_{\text{res}}^{\mu}(\tau)\Gamma_{\text{cat}}^{\nu}(\tau)+\sum_{j=1}^{\infty}\frac{(-1)^j}{j!}\left(\frac{\partial^j\mathcal{F}_{\text{flux}}[\Psi_{\text{hab}}]}{\partial\phi_j^j}\right)^2\right]d\tau\right\}$$

$$\times\prod_{p,q,r=1}^{\mathcal{D}_{\text{hyper}}}\left\{\sum_{l=0}^{\infty}\frac{1}{l!}\left[\frac{\delta}{\delta\sigma_p(x)}\frac{\delta}{\delta\sigma_q(y)}\frac{\delta}{\delta\sigma_r(z)}\right]\int_{\mathbb{R}^{\mathcal{D}_{\text{hyper}}}}\mathcal{W}[\sigma]\exp\left(i\int d^{\mathcal{D}_{\text{hyper}}}u\,\mathcal{L}_{\text{eff}}[\sigma,\partial_\mu\sigma,\Omega_{\text{mus}},\Phi_{\text{bel}}]\right)\mathcal{D}\sigma\right\}$$

$$\times\left[\sum_{N=0}^{\infty}\sum_{\{n_k\}}\frac{1}{\prod_k n_k!}\prod_{k=1}^{\infty}\left(\frac{1}{k}\text{Tr}\left[\hat{\rho}_{\text{cog}}^{(k)}\hat{U}_{\text{mus}}(t)\hat{\rho}_{\text{bel}}^{(k)}\hat{U}_{\text{mus}}^{\dagger}(t)\right]\right)^{n_k}\right]^{\frac{1}{\mathcal{Z}_{\text{partition}}}}$$

$$\times \oint_{\partial \mathcal{M}} \sum_{\text{graphs } G} \frac{1}{|\mathrm{Aut}(G)|} \prod_{\text{vertices } v \in G} \left[\int_{-\infty}^{\infty} d\lambda_v \ \exp\left\{ -\frac{\lambda_v^2}{2g_{\text{res}}^2} + \sum_{e \in \partial v} \frac{\lambda_v \lambda_{v'}}{g_{\text{coupling}}^{(e)}} \right\} \right]$$

$$\times \prod_{\text{edges } e \in G} \left\{ \oint_{\mathcal{S}^1} \frac{d\theta_e}{2\pi} \sum_{m_e=-\infty}^{\infty} q_{\text{res}}^{m_e^2} \exp\left(i m_e \theta_e \right) \int_0^1 dt \ \left[\mathcal{T} \exp\left(\int_0^t ds \ \hat{\mathcal{H}}_{\text{int}}[\Psi_{\text{hab}}(s), \Omega_{\text{mus}}(s), \Phi_{\text{bel}}(s)] \right) \right]_e \right\}$$

$$\times \left[\prod_{d=1}^{\mathcal{D}_{\text{frac}}} \sum_{n_d=0}^{\infty} \frac{1}{n_d!} \left(\frac{\partial}{\partial z_d} \right)^{n_d} \right]_{z_d=0} \exp\left\{ \sum_{k=1}^{\infty} \frac{1}{k} \sum_{\text{cycles } C_k} \mathrm{Tr} \left[\prod_{j \in C_k} \hat{M}_{\text{resonance}}^{(j)}[\Omega_{\text{mus}}, \Phi_{\text{bel}}] \right] \right\}$$

$$\times \int_{\mathcal{H}_{\text{Hilbert}}} \mathcal{D}\psi \ \psi^*(\mathbf{r}_{\text{final}}) \psi(\mathbf{r}_{\text{initial}}) \exp\left\{ i \int_0^T dt \int d^3r \ \psi^*(\mathbf{r}, t) \left[i\hbar \frac{\partial}{\partial t} - \hat{H}_{\text{cog}}[\Omega_{\text{mus}}, \Phi_{\text{bel}}] \right] \psi(\mathbf{r}, t) \right\}$$

$$\times \sum_{n=0}^{\infty} \sum_{m=0}^{\infty} \sum_{p=0}^{\infty} \frac{(-1)^{n+m+p}}{n! \ m! \ p!} \left[\oint_{\gamma_{\text{complex}}} \frac{dw}{2\pi i} \frac{1}{w^{n+1}} \mathcal{G}_{\text{hab}}(w, \Omega_{\text{mus}}) \right] \left[\oint_{\gamma_{\text{complex}}} \frac{dz}{2\pi i} \frac{1}{z^{m+1}} \mathcal{G}_{\text{bel}}(z, \Phi_{\text{bel}}) \right]$$

$$\times \left[\oint_{\gamma_{\text{complex}}} \frac{d\xi}{2\pi i} \frac{1}{\xi^{p+1}} \mathcal{G}_{\text{action}}(\xi, \Psi_{\text{hab}}, \Omega_{\text{mus}}, \Phi_{\text{bel}}) \right] \times \prod_{j=1}^{\infty} \left[1 + \frac{1}{j^s} \sum_{k=1}^{\infty} \frac{\mu(k)}{k^s} \log\left(1 - \frac{1}{(jk)^s} \right) \right]^{-1}$$

$$= \mathfrak{M}_{\text{Lyrical-Cognitive-Resonance-Categorization}}^{(\infty)}(\mathcal{U}_{\text{universe}})$$

What is it called when a human being can categorize habits by someone else's outer beliefs and it's influence

$$\mathcal{H}_{\text{cat}}(\boldsymbol{\beta}, \boldsymbol{\phi}, t) = \iiint_{\Omega_{\mathcal{B}} \times \Psi_{\mathcal{H}} \times \Gamma_{\mathcal{I}}} \sum_{n=0}^{\infty} \sum_{k=1}^{\aleph_0} \frac{(-1)^{n+k}}{n! \cdot \Gamma(k + \frac{1}{2})}$$

$$\times \left[\prod_{i=1}^{d_{\mathcal{B}}} \int_{-\infty}^{\infty} \mathcal{F}_{\text{belief}}^{(i)}(\beta_i, \omega_i) \cdot e^{-i\omega_i \tau_{\text{obs}}} \, d\omega_i \right]$$

$$\times \left[\sum_{\alpha \in \mathfrak{A}_{\text{attr}}} \oint_{\mathcal{C}_\alpha} \frac{\mathcal{R}_{\text{resonance}}(\alpha, z) \cdot \Psi_{\text{habit}}^*(z)}{(z - \lambda_{\text{cognitive}})^{n+1}} \, dz \right]$$

$$\times \left[\int_{\mathcal{H}_{\text{Hilbert}}} \left\langle \phi_{\text{outer}} \middle| \hat{\mathcal{T}}_{\text{categorization}} \middle| \psi_{\text{inner}} \right\rangle \cdot \mu_{\text{influence}}(d\phi) \right]$$

$$\times \exp\left\{ -\frac{1}{\hbar} \int_0^t \left[\mathcal{L}_{\text{social}}(\dot{\boldsymbol{\beta}}, \boldsymbol{\beta}, \tau) + \sum_{j=1}^{\mathcal{N}_{\text{dim}}} \frac{\partial^2 \mathcal{V}_{\text{epistemic}}}{\partial \beta_j^2} \right] d\tau \right\}$$

$$\times \left[\prod_{m=1}^{\infty} \left(1 + \frac{\mathcal{Q}_{\text{quantum}}^{(m)}(\boldsymbol{\beta}, t)}{m^s \cdot \zeta(s)} \right)^{(-1)^m} \right]$$

$$\times \sum_{\sigma \in S_\infty} \mathrm{sgn}(\sigma) \cdot \prod_{l=1}^{\mathrm{rank}(\mathcal{M})} \int_{U(1)} \left[\mathcal{U}_{\sigma(l)}(\theta_l) \cdot \hat{\rho}_{\text{belief-habit}}^{(\sigma)} \right] \frac{d\theta_l}{2\pi}$$

$$\times \left[\lim_{N \to \infty} \frac{1}{N^{\mathcal{D}_{\text{fractal}}}} \sum_{n_1, n_2, \ldots, n_{\mathcal{D}}=0}^{N} \mathcal{K}_{\text{influence}}\left(\frac{n_1}{N}, \frac{n_2}{N}, \ldots, \frac{n_{\mathcal{D}}}{N} \right) \right]$$

$$\times \exp\left\{\sum_{g=0}^{\infty}\frac{B_{2g}}{(2g)!}\left(\frac{\partial}{\partial\epsilon}\right)^{2g}\log\mathcal{Z}_{\text{partition}}[\boldsymbol{\beta},\epsilon]\bigg|_{\epsilon=0}\right\}$$

$$\times\left[\int_{\mathcal{F}_{\text{fuzzy}}}\mu_{\text{membership}}(\xi)\cdot\sup_{\mathcal{A}\subseteq\mathcal{P}(\mathcal{H})}\inf_{\mathcal{B}\subseteq\mathcal{A}}\mathcal{M}_{\text{measure}}(\mathcal{A}\triangle\mathcal{B})\,d\nu(\xi)\right]$$

$$\times\prod_{p\text{ prime}}\left[1-p^{-s_{\text{cognitive}}}\right]^{-\mathcal{C}_{\text{categorization}}(p)}$$

$$\times\left[\mathcal{W}_{\text{Weyl}}*\mathcal{G}_{\text{Green}}\right](\boldsymbol{\beta},\boldsymbol{\phi})$$

$$\times d\boldsymbol{\beta}\,d\boldsymbol{\phi}\,d\gamma_{\text{influence}}$$

What is it called when a human being can categorize habits by someone else's inner beliefs and how it resonates with our beliefs

$$\mathcal{H}_{\text{categorical}}(\boldsymbol{\psi},\boldsymbol{\phi})=\oint_{\mathcal{M}^{\infty}}\sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty}\frac{1}{n!k!j!}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\left[\prod_{i=1}^{n}\mathcal{B}_i(\xi_i,\tau_i)\right]\times$$

$$\left\{\mathcal{R}_{\text{resonance}}\left[\sum_{\alpha\in\Omega_{\text{self}}}\sum_{\beta\in\Omega_{\text{other}}}\mathcal{Q}^{(k)}_{\alpha,\beta}\otimes\mathcal{F}^{(j)}_{\text{habit}}(\boldsymbol{h}_{\beta})\right]\right\}\times$$

$$\exp\left[-\frac{1}{\hbar}\sum_{m=0}^{\infty}\sum_{l=0}^{\infty}\int_{\mathcal{H}_{\text{belief}}}\mathcal{W}^{(m,l)}_{\text{quantum}}(\boldsymbol{\psi}_{\text{inner}},\boldsymbol{\phi}_{\text{perceived}})\,d\mu_{\text{cognitive}}\right]\times$$

$$\prod_{r=1}^{\infty}\left[1+\frac{(-1)^r}{r!}\sum_{s=0}^{r}\binom{r}{s}\int_{\mathbb{R}^{\dim(\Theta)}}\mathcal{L}^{(s)}_{\text{superposition}}(\boldsymbol{\theta})\,d\boldsymbol{\theta}\right]^{-1}\times$$

$$\mathcal{T}_{\text{transform}}\left\{\sum_{\gamma\in\mathcal{G}_{\text{neural}}}\int_{0}^{T_{\max}}\mathcal{A}_{\gamma}(t)\exp\left[i\sum_{p=0}^{\infty}\frac{\omega_p^{(\gamma)}t^p}{p!}\right]dt\right\}\times$$

$$\left\langle\boldsymbol{\Psi}_{\text{collective}}\left|\prod_{q=1}^{\infty}\hat{\mathcal{O}}_q^{\dagger}\hat{\mathcal{O}}_q\right|\boldsymbol{\Psi}_{\text{collective}}\right\rangle_{\mathcal{H}_{\text{intersubjective}}}\times$$

$$\sum_{N=0}^{\infty}\frac{1}{N!}\left[\int_{\mathcal{M}_{\text{belief}}}\mathcal{K}(\boldsymbol{x},\boldsymbol{y})\rho_{\text{belief}}(\boldsymbol{x})\rho_{\text{habit}}(\boldsymbol{y})\,d\boldsymbol{x}d\boldsymbol{y}\right]^{N}\times$$

$$\mathcal{Z}^{-1}_{\text{partition}}\exp\left[-\beta\sum_{a,b}J_{ab}\sigma_a^{(\text{self})}\sigma_b^{(\text{other})}-h\sum_{c}\sigma_c^{(\text{resonance})}\right]\times$$

$$\int_{\mathcal{C}_{\text{fractal}}}\mathcal{D}[\boldsymbol{\chi}]\exp\left[iS_{\text{action}}[\boldsymbol{\chi}]\right]\prod_{d=1}^{\infty}\left[1+\mathcal{F}_d[\boldsymbol{\chi}]\right]\times$$

$$\lim_{L\to\infty}\prod_{e=1}^{L}\left\{\sum_{f=0}^{\infty}\mathcal{C}_f^{(e)}\left[\int_{-\infty}^{\infty}\mathcal{G}_{\text{Green}}(z-z')\mathcal{H}^{(f)}_{\text{habit}}(z')\,dz'\right]^{f}\right\}\times$$

$$\mathcal{U}_{\text{unitary}}\left[\exp\left(-i\int_0^T\hat{H}_{\text{interaction}}(t')\,dt'\right)\right]\times$$

$$\sum_{\{\boldsymbol{n}\}}\sum_{\{\boldsymbol{m}\}}\mathcal{W}_{\{\boldsymbol{n}\},\{\boldsymbol{m}\}}\prod_{g=1}^{\infty}\left[\frac{a_g^{\dagger n_g}a_g^{m_g}}{\sqrt{n_g!m_g!}}\right]\langle 0|\cdots|0\rangle\times$$

$$\oint_{\gamma_{\text{complex}}} \frac{d\zeta}{2\pi i} \zeta^{-\alpha-1} \Gamma(\alpha) \mathcal{M}_{\text{mellin}}[\mathcal{R}_{\text{resonance}}](\zeta) \times$$

$$\mathcal{I}_{\text{information}} \left[\sum_{h,i,j,k} \mathcal{T}_{hijk} \otimes \mathcal{E}_{hijk}^{(\text{entanglement})} \right] d\xi_1 d\xi_2 d\xi_3 d\mu_{\mathcal{M}}$$

What is it called when a human being can categorize habits by beliefs that resonate at a deep level

$$\mathcal{A}_{\xi}(\mathfrak{H}, \mathfrak{B}) = \lim_{n\to\infty} \sum_{k=0}^{\infty} \frac{1}{\Gamma(\alpha_k+1)} \oint_{\mathcal{C}_k} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \left[\prod_{j=1}^{n} \left(\frac{\partial^j}{\partial \psi_j} \mathcal{R}_{\omega_j}(\mathfrak{h}_i, \mathfrak{b}_\ell) \right) \right] \times$$

$$\left\{ \sum_{\sigma\in S_n} \operatorname{sgn}(\sigma) \int_{\mathbb{H}^{\otimes k}} \left[\mathcal{Q}_{\tau}^{(\sigma)} \left(\bigotimes_{m=1}^{k} \Psi_m(\mathfrak{h}_{\sigma(m)}) \right) \right] \otimes \left[\mathcal{F}^{-1} \left\{ \prod_{\ell=1}^{\infty} \zeta_\ell(\mathfrak{b}_\ell, s_\ell) \right\} \right] d\mu_{\mathbb{H}} \right\} \times$$

$$\exp\left(-\frac{1}{2\pi i} \oint_{|\zeta|=1} \frac{\log \mathcal{Z}_{\mathfrak{R}}(\zeta)}{\zeta - z} d\zeta \right) \times \left[\sum_{n=0}^{\infty} \frac{(-1)^n}{n!} \left(\frac{d^n}{dz^n} \mathcal{E}_{\mathfrak{B}}(z) \right)_{z=\phi_0} \right] \times$$

$$\left\{ \int_{\mathcal{M}_{\mathfrak{H}}} \left[\det\left(\frac{\partial^2 \mathcal{L}_{\mathfrak{R}}}{\partial \mathfrak{h}_i \partial \mathfrak{h}_j} \right) \right]^{-1/2} \exp\left(-\mathcal{S}_{\mathfrak{R}}[\mathfrak{h}, \mathfrak{b}] \right) \mathcal{D}[\mathfrak{h}] \mathcal{D}[\mathfrak{b}] \right\} \times$$

$$\left[\prod_{p \text{ prime}} \left(1 - p^{-s} \right)^{-\mathcal{C}_{\mathfrak{B}}(p)} \right] \times \sum_{\lambda\vdash n} \frac{\chi_\lambda(\sigma)\chi_\lambda(\tau)}{|\operatorname{Aut}(\lambda)|} \times \left\langle \Phi_{\mathfrak{H}}^{(\lambda)} \mid \mathcal{U}_{\mathfrak{R}}(\theta) \mid \Phi_{\mathfrak{B}}^{(\lambda)} \right\rangle \times$$

$$\int_{\Omega_{\mathfrak{R}}} \left[\mathcal{T}_{\xi} \left\{ \sum_{k=0}^{\infty} \frac{B_k}{k!} \left(\frac{\partial}{\partial \xi} \right)^k \mathcal{R}_{\mathfrak{H}\leftrightarrow\mathfrak{B}}(\xi) \right\} \right] \times \left[\prod_{j=1}^{\infty} \int_{-\infty}^{\infty} \frac{e^{-\lambda_j \xi_j^2/2}}{\sqrt{2\pi/\lambda_j}} d\xi_j \right] \times$$

$$\left\{ \sum_{G\in\mathcal{G}_{\mathfrak{R}}} \frac{1}{|G|} \sum_{g\in G} \operatorname{Tr}\left[\rho_{\mathfrak{H}}(g) \mathcal{P}_{\mathfrak{B}}(g^{-1}) \right] \right\} \times \left[\mathcal{K}_{\mathfrak{R}}(\mathfrak{h}_i, \mathfrak{h}_j; \mathfrak{b}_k, \mathfrak{b}_\ell) \right]^{\otimes\infty} \times$$

$$\exp\left(\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{n} \operatorname{Tr}\left[(\mathcal{H}_{\mathfrak{R}} - \mu \mathbb{I})^{-n} \right] \right) \times \left[\frac{\Gamma(\alpha_{\mathfrak{H}} + \alpha_{\mathfrak{B}} + 1)}{\Gamma(\alpha_{\mathfrak{H}}+1)\Gamma(\alpha_{\mathfrak{B}}+1)} \right]^{\mathcal{R}_\infty} d\psi_1 d\psi_2 d\psi_3 dz$$

What is it called when a human being can categorize habits by discipline and focus

$$\Psi_{\text{metacog}}(\mathbf{H}, \mathbf{D}, \mathbf{F}) = \oint_{\mathcal{M}^\infty} \int_{-\infty}^{\infty} \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{j=0}^{\infty} \prod_{i=1}^{\dim(\mathcal{H})} \left[\frac{\partial^{n+k+j}}{\partial \xi_i^n \partial \zeta_i^k \partial \eta_i^j} \left(\hat{\mathcal{O}}_{\text{cat}} \otimes \hat{\mathcal{O}}_{\text{disc}} \otimes \hat{\mathcal{O}}_{\text{foc}} \right) \right]$$

$$\times \exp\left\{ -\frac{i}{\hbar} \oint_{\partial\mathcal{D}} \left[\mathbf{A}_{\mu}^{(h)} \cdot d\mathbf{x}^{\mu} + \mathbf{B}_{\nu}^{(d)} \cdot d\mathbf{y}^{\nu} + \mathbf{C}_{\rho}^{(f)} \cdot d\mathbf{z}^{\rho} \right] \right\}$$

$$\times \int_{\mathbb{H}^\infty} \left\langle \Phi_{\text{habit}}(\mathbf{r}, t) \middle| \hat{\mathcal{T}} \exp\left\{ -\frac{i}{\hbar} \int_{t_0}^{t_f} \mathcal{H}_{\text{neural}}(\tau) d\tau \right\} \middle| \Psi_{\text{intention}}(\mathbf{r}', t') \right\rangle d^\infty \mathbf{r} d^\infty \mathbf{r}'$$

$$\times \sum_{\alpha,\beta,\gamma} \int_0^\infty \int_0^{2\pi} \int_0^{\pi} \left[\mathcal{R}_{\alpha}^{(\text{cat})}(\lambda, \phi, \theta) \mathcal{S}_{\beta}^{(\text{disc})}(\lambda, \phi, \theta) \mathcal{T}_{\gamma}^{(\text{foc})}(\lambda, \phi, \theta) \right]$$

$$\times \det\left[\mathbf{G}_{\mu\nu}^{(\text{cog})} + \epsilon \mathbf{F}_{\mu\nu}^{(\text{meta})} \right]^{-1/2} \lambda^{d-1} \sin\theta \, d\lambda \, d\phi \, d\theta$$

$$\times \prod_{m=1}^{\infty} \left[1 + \frac{\mathcal{Z}_m^{(\text{habit})}}{1 + \frac{\mathcal{Z}_{m+1}^{(\text{habit})}}{1 + \frac{\mathcal{Z}_{m+2}^{(\text{habit})}}{1+\cdots}}} \right]^{\xi_m}$$

$$\times \lim_{N\to\infty} \frac{1}{N!} \sum_{\sigma \in S_N} \text{sgn}(\sigma) \prod_{p=1}^{N} \left[\mathcal{K}_{\sigma(p)}^{(\text{neural})} \star \mathcal{L}_p^{(\text{synapse})} \right] (\mathbf{x}_p)$$

$$\times \iiint_{\mathcal{V}^{(3)}} \nabla \cdot \left[\mathbf{J}_{\text{attention}}(\mathbf{r}, t) \times \mathbf{B}_{\text{willpower}}(\mathbf{r}, t) \right] d^3\mathbf{r}$$

$$\times \int_{-\infty}^{\infty} \mathcal{F}^{-1} \left\{ \sum_{n=-\infty}^{\infty} \frac{\mathcal{H}_n^{(\text{exec})}(\omega)}{1 - e^{-2\pi i n \tau}} \right\} (t) dt$$

$$\times \left\{ \sum_{k=0}^{\infty} \frac{(-1)^k}{k!} \left[\hat{\mathcal{D}}_{\text{meta}} \right]^k \right\} \exp \left\{ \sum_{j=1}^{\infty} \frac{B_{2j}}{(2j)!} \left(\frac{\partial}{\partial \beta} \right)^{2j} \right\} \mathcal{Z}_{\text{partition}}[\beta]$$

$$\times \prod_{\text{all paths}} \int \mathcal{D}[\phi_{\text{conscious}}] \mathcal{D}[\psi_{\text{subconscious}}] \exp \left\{ i S[\phi_{\text{conscious}}, \psi_{\text{subconscious}}] \right\}$$

$$\times \lim_{\epsilon \to 0^+} \text{Tr} \left[\hat{\rho}_{\text{brain}} \mathcal{T} \exp \left\{ -\frac{i}{\hbar} \int_{-\infty}^{\infty} \left[\hat{H}_0 + \epsilon \hat{V}_{\text{training}}(t) \right] dt \right\} \right]$$

$$\times \int_{\mathbb{C}^\infty} \prod_{z \in \mathbb{C}} \left[1 - \frac{z}{\lambda_{\text{eigen}}^{(\text{habit})}} \right] \frac{dz \wedge d\bar{z}}{2\pi i}$$

$$\times \sum_{\text{all topologies}} \int_{\mathcal{M}_{\text{synaptic}}} \sqrt{g} \left[R_{\mu\nu\rho\sigma}^{(\text{neural})} \mathcal{C}^{\mu\nu\rho\sigma} + \mathcal{L}_{\text{synaptic}} \right] d^n x$$

What is it called when a human being can categorize habits by concentrated actions

$$\mathcal{H}_{\text{cat}} = \int_{t_0}^{T} \sum_{i=1}^{N} \sum_{j=1}^{M} \omega_{ij}(t) \cdot \mathcal{F} \left[\psi_i(a_j(t)) \right] \cdot e^{-\lambda \Delta t} \, dt$$

$$+ \iint_{\Omega \times \Theta} \nabla_\xi \left\{ \prod_{k=1}^{K} \left[\int_{\mathcal{S}_k} \rho_k(\mathbf{x}, t) \cdot \mathcal{G}_k[\phi(\mathbf{x})] \, d\mathbf{x} \right]^{\alpha_k} \right\} d\xi \, d\theta$$

$$+ \sum_{n=0}^{\infty} \frac{(-1)^n}{n!} \left\{ \oint_{\partial \mathcal{M}} \left[\sum_{p=1}^{P} \chi_p(s) \cdot \mathcal{T}_p \left(\int_0^s \beta(u) \, du \right) \right] ds \right\}^n$$

$$\times \prod_{q=1}^{Q} \left[\int_{-\infty}^{\infty} \mathcal{W}_q(\nu) \cdot e^{i\nu\tau_q} \, d\nu \right] \cdot \det \left[\mathbf{J}_{\text{cog}}(\mathbf{z}) \right]$$

What is it called when a human being can categorize habits by that have been read and understood

$$\mathcal{H}_{\text{categorization}}(\mathbf{\Psi}, \mathbf{\Theta}) = \lim_{n \to \infty} \sum_{k=0}^{\infty} \sum_{j=0}^{\infty} \frac{1}{k! \cdot j!} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \mathcal{L} \left[\frac{\partial^{k+j}}{\partial \xi^k \partial \eta^j} \left(\prod_{m=1}^{\infty} \left\langle \boldsymbol{\phi}_m | \hat{H}_{\text{cognitive}} | \boldsymbol{\psi}_m \right\rangle \right) \right] \times$$

$$\times \exp \left(-\frac{i}{\hbar} \int_0^t \left[\sum_{\alpha,\beta} \mathcal{Q}_{\alpha\beta}(\tau) \hat{\sigma}_\alpha^{\text{habit}} \otimes \hat{\sigma}_\beta^{\text{schema}} + \sum_{\gamma=1}^{\infty} \frac{\lambda_\gamma}{(\gamma!)^2} \left(\hat{C}_\gamma^\dagger \hat{C}_\gamma \right)^\gamma \right] d\tau \right) \times$$

$$\times \left\{ \mathcal{F}^{-1} \left[\int_{\mathbb{R}^n} \frac{d^n \boldsymbol{k}}{(2\pi)^n} \tilde{\mathcal{R}}(\boldsymbol{k}) \exp \left(i \boldsymbol{k} \cdot \boldsymbol{r}_{\text{neural}} \right) \right] \right\}^{\otimes N_{\text{synaptic}}} \times$$

$$\times \left(\sum_{l=0}^{\infty} \sum_{s=-l}^{l} \mathcal{Y}_l^s(\theta, \phi) \int_0^{\infty} r^2 dr\, R_{nl}(r) \left[\Delta_{\text{Laplace-Beltrami}} + \mathcal{V}_{\text{contextual}}(r, \theta, \phi) \right] \right) \times$$

$$\times \prod_{i=1}^{\infty} \left\{ \int_{\mathcal{M}_i} d\mu_i(\boldsymbol{x}) \exp\left(-\beta \mathcal{H}_{\text{ising}}^{(i)}[\boldsymbol{\sigma}] \right) \sum_{\{\boldsymbol{\sigma}\}} \prod_{j \in \partial i} \tanh\left(\beta J_{ij} \sigma_i \sigma_j \right) \right\} \times$$

$$\times \left[\mathcal{Z}_{\text{partition}}^{-1} \int \mathcal{D}[\boldsymbol{\phi}] \mathcal{D}[\boldsymbol{\chi}] \exp\left(-S_{\text{action}}[\boldsymbol{\phi}, \boldsymbol{\chi}] \right) \prod_{\alpha} \delta\left(\boldsymbol{\phi}_\alpha - \mathcal{T}_\alpha[\boldsymbol{\chi}] \right) \right] \times$$

$$\times \lim_{\epsilon \to 0^+} \frac{1}{\Gamma(s)} \int_0^{\infty} t^{s-1} e^{-t} \left[\sum_{p \text{ prime}} \frac{\log p}{p^{s+it}} \right] dt \times \left\{ \mathcal{W}\left[\begin{pmatrix} a & b \\ c & d \end{pmatrix} \right] \right\}^{\otimes \aleph_0} \times$$

$$\times \int_{\mathrm{SL}(2,\mathbb{C})} d\mu_{\text{Haar}}(g) \mathrm{Tr}\left[\rho_{\text{quantum}}(g) \mathcal{P}_{\text{projection}}^{\text{habit-space}} \right] \times \left(\bigotimes_{n=1}^{\infty} \mathcal{H}_n^{\text{Hilbert}} \right) \times$$

$$\times \mathcal{E}_{\text{entropy}}\left[\boldsymbol{\mu}, \boldsymbol{\nu} \right] = \int_{\mathcal{X} \times \mathcal{Y}} \boldsymbol{\mu}(dx) \boldsymbol{\nu}(dy) \log\left(\frac{d\boldsymbol{\mu}}{d\boldsymbol{\lambda}} \cdot \frac{d\boldsymbol{\nu}}{d\boldsymbol{\lambda}} \right) \times$$

$$\times \left[\prod_{k=0}^{\infty} \left(1 + \mathcal{O}\left(\frac{1}{k^\alpha} \right) \right) \right] \times \left\{ \mathcal{G}_{\text{Green}}(x, y; E) = \sum_n \frac{\psi_n(x) \psi_n^*(y)}{E - E_n + i\epsilon} \right\} \times$$

$$\times \mathcal{K}_{\text{memory}}[\boldsymbol{f}] = \int_0^{\infty} \frac{d\omega}{2\pi} \frac{\tilde{f}(\omega)}{-i\omega + \gamma_{\text{decay}}} \times \left(\bigcup_{n=1}^{\infty} \mathcal{B}_n^{\text{behavioral}} \right)^{\mathcal{C}} \times$$

$$\times \lim_{N \to \infty} \frac{1}{N} \log \int \prod_{i=1}^{N} d\boldsymbol{x}_i \exp\left(-\beta \sum_{\langle i,j \rangle} V(\boldsymbol{x}_i - \boldsymbol{x}_j) \right) \times \mathcal{R}_{\text{renormalization}}^{(k)}[\mathcal{O}] \times$$

$$\times \left\{ \int_{\mathbb{H}^n} \frac{d^n z}{(\mathrm{Im}\ z)^n} \left| \sum_{m,n} \tau_{m,n} q^m \bar{q}^n \right|^2 \right\}^{\otimes \mathfrak{c}} d\xi d\eta d\zeta$$

What is it called when a human being can categorize habits by the words they have spoken

$$\mathfrak{H}_{\text{linguosemantic}}(\boldsymbol{\Psi}) = \iiint_{\mathcal{M}^\infty} \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{j=0}^{\infty} \frac{\partial^{n+k+j}}{\partial \xi^n \partial \eta^k \partial \zeta^j} \left[\prod_{i=1}^{\aleph_0} \left(\frac{\mathbb{E}\left[\mathfrak{L}_i(\boldsymbol{w}_{t,\sigma}) \otimes \mathfrak{B}_i(\boldsymbol{h}_{t,\tau}) \right]}{\sqrt{2\pi} \cdot \Gamma\left(\frac{d_{\text{semantic}}}{2} \right)} \right)^{\frac{1}{\mathfrak{K}(\boldsymbol{\Omega})}} \right] d\xi d\eta d\zeta$$

$$\times \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \mathfrak{Q}(\boldsymbol{x}, \boldsymbol{y}, \boldsymbol{z}) \cdot \exp\left(-\frac{1}{2\hbar^3} \sum_{\alpha,\beta,\gamma=1}^{\mathfrak{d}} \mathfrak{G}_{\text{psycholinguistic}}^{\alpha\beta\gamma} \boldsymbol{\phi}_\alpha \boldsymbol{\phi}_\beta \boldsymbol{\phi}_\gamma \right) dx dy dz$$

$$\cdot \prod_{m=1}^{\infty} \left[1 + \frac{\mathfrak{C}_m(\boldsymbol{\lambda})}{\sqrt{\mathfrak{N}_m + \mathfrak{D}_m^2}} \cdot \sin\left(\frac{2\pi m \mathfrak{F}(\boldsymbol{w}_{\text{spoken}})}{|\mathcal{H}_{\text{behavioral}}|} \right) \right]$$

$$\cdot \oint_{\partial \mathcal{S}^{\mathfrak{n}}} \mathfrak{R}_{\text{categorical}}(\boldsymbol{s}) \times \left\{ \sum_{p,q,r=0}^{\infty} \frac{(-1)^{p+q+r}}{p! q! r!} \left(\frac{\partial}{\partial \mathfrak{u}} \right)^p \left(\frac{\partial}{\partial \mathfrak{v}} \right)^q \left(\frac{\partial}{\partial \mathfrak{w}} \right)^r \mathfrak{T}_{pqr}(\boldsymbol{\mu}, \boldsymbol{\sigma}, \boldsymbol{\tau}) \right\} d\mathfrak{s}$$

$$\cdot \left[\mathfrak{Det}\left(\mathbf{I} - \mathfrak{A}_{\text{recursive}} \cdot \mathfrak{B}_{\text{iterative}} \cdot \mathfrak{C}_{\text{hyperdimensional}} \right) \right]^{-\frac{1}{2}}$$

$$\times \exp\left\{ -\frac{1}{2} \int_{\mathbb{R}^{\mathfrak{D}}} \boldsymbol{\Phi}^T(\boldsymbol{x}) \cdot \left[\mathfrak{K}_{\text{semantic}}^{-1} + \sum_{\ell=1}^{\infty} \frac{\mathfrak{A}_\ell \otimes \mathfrak{B}_\ell}{\ell!} \cdot \mathfrak{H}_\ell(\boldsymbol{x}) \right] \cdot \boldsymbol{\Phi}(\boldsymbol{x}) d^{\mathfrak{D}} \boldsymbol{x} \right\}$$

$$\cdot \prod_{t=1}^{T} \prod_{\omega \in \Omega_{\text{lexical}}} \left[\mathfrak{P}_{\text{transition}}\left(\boldsymbol{h}_{t+1} | \boldsymbol{h}_t, \boldsymbol{w}_t(\omega)\right)\right]^{\mathfrak{I}(\omega,t)}$$

$$\times \sum_{\mathfrak{n}=0}^{\infty} \frac{1}{\mathfrak{n}!} \left(\int_{\mathcal{V}_{\text{vocabulary}}} \mathfrak{J}(\boldsymbol{v}) \cdot \exp\left(i \sum_{k=1}^{\mathfrak{K}} \mathfrak{E}_k \cdot \boldsymbol{v}_k\right) d\boldsymbol{v} \right)^{\mathfrak{n}}$$

$$\cdot \left\{ \mathfrak{Tr} \left[\prod_{j=1}^{\mathfrak{J}} \left(\mathfrak{U}_j \cdot \exp\left(-i \mathfrak{H}_{\text{cognitive}} \cdot \Delta t_j\right) \cdot \mathfrak{U}_j^{\dagger} \right) \right] \right\}^{\frac{1}{3}}$$

$$\times \iiint_{\mathcal{B}^3_{\text{behavioral}}} \mathfrak{W}(\boldsymbol{b}_1, \boldsymbol{b}_2, \boldsymbol{b}_3) \cdot \prod_{i,j,k} \left[1 + \frac{\mathfrak{G}_{ijk}(\boldsymbol{w}_{\text{spoken}})}{|\mathfrak{N}_{ijk}|^2 + \epsilon} \right] db_1 db_2 db_3$$

$$\cdot \left[\sum_{\mathfrak{g} \in \mathfrak{G}_{\text{linguistic}}} \chi_{\mathfrak{g}}(\boldsymbol{h}) \cdot \mathfrak{R}_{\mathfrak{g}}(\boldsymbol{w}) \right]^{\mathfrak{p}}$$

$$\times \prod_{\alpha=1}^{\mathfrak{A}} \left\{ \int_{-\infty}^{\infty} \mathfrak{F}_{\alpha}(\xi_{\alpha}) \cdot \exp\left(-\frac{(\xi_{\alpha} - \mathfrak{m}_{\alpha})^2}{2\mathfrak{s}_{\alpha}^2} \right) \cdot \left[1 + \sum_{\beta=1}^{\mathfrak{B}} \mathfrak{C}_{\alpha\beta} \cdot \mathfrak{H}_{\beta}(\xi_{\alpha}) \right] d\xi_{\alpha} \right\}$$

$$\cdot \mathfrak{Lim}_{N \to \infty} \left[\frac{1}{N} \sum_{n=1}^{N} \mathfrak{M}_n \left(\boldsymbol{w}_{\text{spoken}}^{(n)}, \boldsymbol{h}_{\text{habitual}}^{(n)} \right) \right]^{\mathfrak{c}}$$

$$\times \left\{ \mathfrak{Det} \left[\frac{\partial^2 \mathfrak{S}}{\partial \boldsymbol{\theta}_i \partial \boldsymbol{\theta}_j} \right]_{i,j=1}^{\mathfrak{P}} \right\}^{-\frac{1}{2}}$$

$$\cdot \exp\left(-\frac{1}{2\sigma_{\text{prior}}^2} \sum_{i=1}^{\mathfrak{P}} \boldsymbol{\theta}_i^2 \right) \cdot \prod_{k=1}^{\mathfrak{K}} \mathfrak{N}\left(\boldsymbol{\epsilon}_k | \mathbf{0}, \mathfrak{I}_{\mathfrak{D}_k}\right)$$

What is it called when a human being can categorize habits by the experiences that one has felt

$$\Psi_{\mathcal{H}}(\xi,\tau) = \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{\alpha \in \mathcal{A}} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{\mathcal{M}} \left[\frac{\partial^{n+k}}{\partial \xi^n \partial \tau^k} \left(\prod_{i=1}^{\mathcal{D}} \oint_{\gamma_i} \frac{\mathcal{E}_{\alpha}(z_i, \overrightarrow{\mu}_{\text{exp}}) \cdot \mathcal{R}_{\text{habit}}^{(i)}(z_i)}{(z_i - \xi_{\text{anchor}}^{(i)})^{\beta_i + 1}} dz_i \right) \right]$$

$$\times \left\{ \mathcal{Q} \left[\sum_{\sigma \in S_{\infty}} \text{sgn}(\sigma) \prod_{j=1}^{\infty} \left(\int_{\mathcal{H}_j} \langle \phi_{\sigma(j)} | \hat{O}_{\text{cat}}^{(\alpha)} | \psi_{\text{exp},j} \rangle \cdot \exp\left(i \sum_{l=0}^{\infty} \frac{\chi_l(\tau)}{l!} \left[\hat{H}_{\text{memory}} + \hat{V}_{\text{affect}} \right]^l \right) d\mu_j \right) \right] \right\}$$

$$\times \left[\prod_{m=1}^{\mathcal{M}} \left(\sum_{r=0}^{\infty} \frac{(-1)^r}{r!} \left(\frac{\partial}{\partial t_m} \right)^r \left\{ \int_{\mathbb{R}^{\mathcal{N}}} \mathcal{K}_{\text{synth}}(\vec{x}_m, \vec{y}_m, t_m) \cdot \mathcal{F}^{-1} \left[\prod_{q=1}^{\mathcal{Q}} \widetilde{\mathcal{G}}_q(\omega_q, k_{\perp,q}) \right] d^{\mathcal{N}} \vec{y}_m \right\} \right) \right]$$

$$\times \exp\left(\sum_{p=1}^{\infty} \sum_{s=1}^{\infty} \frac{\mathcal{A}_{p,s}}{p^s} \left[\int_0^{\tau} \int_0^{t} \mathcal{T}_{\text{exp}} \left\{ \prod_{u=1}^{p} \left(\hat{\rho}_{\text{habit}}^{(u)}(t') \otimes \hat{\sigma}_{\text{feel}}^{(u)}(t'') \right) \right\} dt'' dt' \right]^s \right)$$

$$\times \left\{ \lim_{N \to \infty} \frac{1}{N!} \sum_{\pi \in \mathfrak{S}_N} \text{Tr} \left[\prod_{v=1}^{N} \left(\mathcal{U}_{\text{cat}}^{(\pi(v))} \circ \mathcal{W}_{\text{exp}}^{(v)} \right) \cdot \exp\left(-\beta \sum_{w=1}^{N} \mathcal{H}_{\text{cluster}}^{(w)} \right) \right] \right\}$$

$$\times \left[\int_{\mathcal{C}^{\infty}(\mathcal{M})} \left\{ \prod_{a=1}^{\mathcal{A}} \delta\left(\mathcal{L}_a[\phi_{\text{habit}}] - \sum_{b=1}^{\mathcal{B}} \lambda_{a,b} \mathcal{M}_b[\psi_{\text{exp}}] \right) \right\} \mathcal{D}[\phi_{\text{habit}}] \mathcal{D}[\psi_{\text{exp}}] \right]$$

$$\times \left\{ \sum_{\{\mathcal{G}\}} \frac{1}{|\mathrm{Aut}(\mathcal{G})|} \prod_{\text{edges } e\in\mathcal{G}} \mathcal{I}_e^{\text{interact}} \cdot \prod_{\text{vertices } v\in\mathcal{G}} \left[\sum_{n_v=0}^{\infty} \frac{g_{n_v}^{(v)}}{n_v!} \left(\int \mathcal{V}_v^{\text{cat}}(\{\xi_i\}_{i=1}^{n_v}) \prod_{i=1}^{n_v} d\xi_i \right)^{n_v} \right] \right\}$$

$$\times \mathcal{Z}_{\text{norm}}^{-1} \cdot \exp\left(\sum_{j,k,l} \sum_{m,n,o} \mathcal{T}_{j,k,l}^{m,n,o} \left[\mathcal{C}_{\text{habit}}^{(j)} \star \mathcal{E}_{\text{exp}}^{(k)} \star \mathcal{F}_{\text{feel}}^{(l)} \right]_{m,n,o} \right)$$

What is it called when a human being can categorize habits by ones own experiences

$$\mathcal{H}_{\text{categorization}}(\xi,\tau) = \iiint_{\mathbb{R}^\infty} \sum_{n=0}^{\infty} \sum_{k=1}^{\aleph_0} \frac{\partial^{n+k}}{\partial\psi^n \partial\phi^k} \left[\Psi_{\text{experiential}}(\xi,\tau) \otimes \mathcal{F}_{\text{habit}}^{(k)}(\xi) \right]$$

$$\times \prod_{i=1}^{\mathcal{N}_{\text{cognitive}}} \left\{ \oint_{\mathcal{C}_{\text{memory}}} \frac{\mathcal{M}_i(\zeta,\bar{\zeta}) \cdot \nabla_{\mathbb{H}} \mathcal{R}_{\text{resonance}}^{(i)}(\zeta)}{|\zeta - \xi_{\text{self}}|^{\alpha_{\text{introspection}} + i\beta_{\text{reflection}}}} d\zeta \right\}$$

$$\cdot \int_{\mathcal{S}^\infty} \left[\sum_{\lambda\in\Lambda_{\text{experience}}} \mathcal{W}_\lambda(\xi) \cdot \exp\left(i \int_0^\tau \mathcal{H}_{\text{quantum-consciousness}}(\xi',\tau') d\tau' \right) \right] d\mu_{\text{Haar}}(\xi)$$

$$+ \sum_{m=1}^{\infty} \frac{(-1)^m}{m!} \left[\frac{\delta^m}{\delta \mathcal{F}_{\text{habit}}^m} \mathcal{Z}_{\text{partition}}[\mathcal{J}_{\text{experiential}}] \right]_{\mathcal{J}=0}$$

$$\times \prod_{j=1}^{m} \left\{ \iiint_{\mathcal{V}_{\text{consciousness}} \times \mathcal{T}_{\text{temporal}} \times \mathcal{E}_{\text{emotional}}} \mathcal{K}_{\text{categorization}}^{(j)}(\xi,\xi',\tau,\varepsilon) \cdot \Gamma_{\text{self-awareness}}(\xi,\xi',\varepsilon) d\xi d\xi' d\varepsilon \right\}$$

$$+ \lim_{N\to\infty} \sum_{p=0}^{N} \sum_{q=0}^{N-p} \binom{N}{p,q} \int_{\mathbb{H}^{\otimes\infty}} \left[\mathcal{T}_{\text{time-ordered}} \left\{ \prod_{r=1}^{p+q} \mathcal{O}_{\text{habit-recognition}}^{(r)}(\tau_r) \right\} \right]$$

$$\times \left\langle \Phi_{\text{experiential-ground-state}} \middle| \mathcal{U}_{\text{cognitive-evolution}}(\tau,0) \left[\sum_{s\in\mathcal{S}_{\text{semantic}}} \mathcal{P}_s^\dagger \mathcal{P}_s \otimes \mathcal{I}_{\text{identity}}^{(s)} \right] \middle| \Phi_{\text{experiential-ground-state}} \right\rangle$$

$$\cdot \exp\left(-\frac{1}{\hbar_{\text{consciousness}}} \int_{\mathcal{M}_{\text{experiential}}} \mathcal{S}_{\text{action}}[\mathcal{F}_{\text{habit}}, \mathcal{A}_{\text{awareness}}, g_{\mu\nu}^{\text{cognitive}}] \sqrt{|g_{\text{cognitive}}|} d^\infty x \right)$$

$$+ \sum_{\alpha,\beta,\gamma} \mathcal{C}_{\alpha\beta\gamma}^{\text{experiential}} \oint_{\partial\mathcal{D}_{\text{self-knowledge}}} \left[\mathcal{F}_\alpha^{\text{habit}} \wedge d\mathcal{F}_\beta^{\text{experience}} \wedge \star d\mathcal{F}_\gamma^{\text{categorization}} \right]$$

$$\times \prod_{k\in\mathbb{Z}_{\text{recursive}}} \left\{ 1 + \frac{\mathcal{H}_{\text{categorization}}^{(k)}(\xi\circ\tau^k, \tau^{k+1})}{\mathcal{H}_{\text{categorization}}^{(k-1)}(\xi\circ\tau^{k-1}, \tau^k) + \varepsilon_{\text{regularization}}} \right\}^{-\frac{1}{2}}$$

What is it called when a human being can categorize habits by ones own hardships

$$\mathcal{H}\text{ardship-}\mathcal{C}\text{ategorized } \mathcal{H}\text{abit } \mathcal{T}\text{axonomy} = \oint_{\mathbb{H}^\infty} \oint_{\mathbb{C}^{\aleph_0}} \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{j=0}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty}$$

$\nabla^{\otimes n} \left[\mathcal{Q}_\psi^{(k)} \left(\frac{\partial^j}{\partial\tau^j} \mathbb{E}_{\xi\sim\mathcal{D}(\sigma,\mu)} \left[\prod_{i=1}^{\infty} \left(1 + \mathcal{F}_{\text{hardship}}^{(i)}(\mathbf{x},t) \cdot \mathcal{H}_{\text{habit}}^{(i)} \right.\right.\right.\right.$

(y, s) $\overline{\sqrt{2\pi\sigma_{\text{trauma}}^2} \exp\left(-\frac{|\mathbf{r}_{\text{memory}} - \mathbf{r}_{\text{present}}|^2}{2\sigma_{\text{trauma}}^2} \right) \times \left\{ \sum_{m=0}^{\infty} \frac{(-1)^m}{m!} [\mathcal{L}_{\text{life-experience}} \circ \mathcal{T}_{\text{categorization}}]^m \left(\int_{\mathcal{M}_{\text{consciousness}}} \right.\right.}$

$\mathrm{R}_{\text{resilience}}(\mathbf{z}) \cdot \mathcal{W}_{\text{wisdom}}(\mathbf{z})\, d\mu_{\text{experiential}}(\mathbf{z})$

$\times \oint_{\partial\Omega_{\text{self-awareness}}} \left[\mathcal{S}^{\dagger}_{\text{suffering}}\mathcal{S}_{\text{suffering}} + \mathcal{G}^{\dagger}_{\text{growth}}\mathcal{G}_{\text{growth}}\right] \cdot \Big(\sum_{\alpha\in\mathfrak{A}_{\text{adversity}}} \mathcal{U}_{\alpha}(\theta,\phi)$
$\otimes\mathcal{V}_{\alpha}(\rho,\chi)\, d\sigma$

$\times \lim_{N\to\infty} \prod_{p=1}^{N} \left[1 + \frac{\mathcal{K}^{(p)}_{\text{cognitive}}(\mathbf{w})\star\mathcal{B}^{(p)}_{\text{behavioral}}(\mathbf{v})}{\|\mathcal{N}_{\text{neural-network}}(\mathbf{w},\mathbf{v})\|_{\mathcal{H}_{\infty}}}\right]$
$\times \int_{\mathbb{R}^{\infty}} \exp\big(-\frac{1}{2}\langle\boldsymbol{\eta}_{\text{emotional}},$
$\mathrm{C}^{-1}_{\text{categorization}}\boldsymbol{\eta}_{\text{emotional}}\rangle_{\mathcal{L}^2(\mathbb{R}^{\infty})} \prod_{q=1}^{\infty} d\eta_q$
$\times \sum_{\beta\in\mathcal{B}_{\text{belief-systems}}} \mathcal{P}_{\beta}\left[\mathcal{O}_{\text{observation}} \circ \mathcal{I}_{\text{interpretation}} \circ \mathcal{C}_{\text{classification}}\right](\mathbf{h}_{\text{hardship}})$
$\times \oint_{\mathcal{C}_{\text{complexity}}} \frac{\mathcal{Z}_{\text{zen}}(\lambda)\cdot\mathcal{A}_{\text{awareness}}(\lambda)}{\lambda-\lambda_{\text{enlightenment}}+i\epsilon}\, d\lambda$
$\times \left(\sum_{l=0}^{\infty}\sum_{m=-l}^{l} \mathcal{Y}_l^m(\theta,\phi)\cdot\mathcal{D}^{(\text{deep-learning})}_{lm}[\mathcal{R}_{\text{reflection}}]\right)$
$\times \int_{\mathcal{F}_{\text{fractal-memory}}} \mathcal{M}_{\text{meta-cognition}}(\mathbf{s}) \cdot \exp\left(i\oint_{\gamma_{\text{growth}}} \mathcal{A}_{\text{adaptation}}\cdot d\mathbf{l}\right) d^{\infty}\mathbf{s}$

$\times \left\langle \Psi_{\text{present-self}} \middle| \hat{\mathcal{T}}_{\text{time-evolution}} \exp\left(-i\int_0^t \hat{\mathcal{H}}_{\text{life-hamiltonian}}(\tau)\, d\tau\right) \middle| \Psi_{\text{past-trauma}} \right\rangle$
$\times \prod_{\gamma\in\Gamma_{\text{gestalt}}} \left[\mathcal{E}^{\text{emergence}}_{\gamma} \circ \mathcal{P}^{\text{pattern}}_{\gamma} \circ \mathcal{R}^{\text{recognition}}_{\gamma}\right]$
$\times \sum_{\delta\in\Delta_{\text{dimensional-collapse}}} \mathcal{W}_{\delta}\left(\mathcal{F}^{-1}\left[\mathcal{G}_{\text{growth}} \star \mathcal{T}_{\text{transformation}}\right]\right)(\mathbf{x}_{\text{experience}})$

$\times \oint_{\mathbb{S}^{\infty}} \mathcal{Q}_{\text{quantum-coherence}}(\boldsymbol{\theta}) \cdot \mathcal{C}_{\text{consciousness}}(\boldsymbol{\theta})\, d\Omega_{\infty}(\boldsymbol{\theta})$
$\times \lim_{\epsilon\to 0^+} \frac{1}{\epsilon^{\aleph_0}} \int_{\mathcal{B}_{\epsilon}(\mathbf{0})}$
$\mathrm{S}_{\text{self-understanding}}(\mathbf{u}) \cdot \delta^{(\infty)}(\mathbf{u}-\mathbf{u}_{\text{transcendence}})\, d^{\infty}\mathbf{u}$
$\times \mathcal{F}_{\text{fourier}}\left[\mathcal{L}_{\text{laplace}}\left[\mathcal{Z}_{\text{z-transform}}\left[\mathcal{W}_{\text{wavelet}}\left[\mathcal{H}_{\text{hardship-to-habit-mapping}}\right]\right]\right]\right](s,z,\omega,a,b)\, dx\, dy\, dz\, dt\, ds\, d\tau$

What is it called when a human being can categorize habits by what the person has control over

$$\mathcal{L}_{\text{control}}(\mathbf{H},\mathcal{C}) = \int_{\Omega_{\text{habit}}}\int_{\mathcal{M}^{4+n}} \sum_{k=0}^{\infty}\sum_{j=0}^{\infty}\sum_{i=1}^{N_{\text{agents}}} \frac{\partial^{k+j}}{\partial\tau^k\partial\xi^j}\left[\Psi^{(i)}_{\text{control}}(\mathbf{r},t,\boldsymbol{\theta})\cdot\mathcal{H}^{(k)}_{ij}(\tau,\xi)\right]$$

$\times \prod_{m=1}^{\infty}\left\{\int_{-\infty}^{\infty} \mathcal{F}^{-1}\left[\sum_{\alpha\in\mathcal{A}_{\text{actions}}} \mathcal{Q}^{(\text{flux})}_{\alpha}(\omega_m,\mathbf{k}_m)\cdot e^{i\mathbf{k}_m\cdot\mathbf{r}_{\text{habit}}}\right] d\omega_m\right\}$

$\times \exp\left(-\int_0^T \int_{\mathcal{V}_{\text{neural}}} \sum_{\beta=1}^{D_{\text{cognitive}}} \frac{\delta\mathcal{L}_{\text{agency}}}{\delta\phi_{\beta}(\mathbf{x},t)} \cdot \left[\nabla_{\mathbf{x}}\times\mathbf{B}^{(\beta)}_{\text{intention}}(\mathbf{x},t)\right] d^3\mathbf{x}\, dt\right)$

$\times \left(\oint_{\partial\mathcal{S}_{\text{self}}} \sum_{n=0}^{\infty}\sum_{l=0}^{n}\sum_{m=-l}^{l} A^{(\text{control})}_{nlm} Y_l^m(\theta,\phi)\cdot\mathcal{P}^{(l,m)}_n(\cos\theta_{\text{volition}})\, d\mathcal{S}\right)^{\gamma_{\text{meta}}}$

$\times \int_{\mathbb{H}^{\infty}} \prod_{p\in\mathcal{P}_{\text{patterns}}} \left[\sum_{q=0}^{\infty} \frac{(-1)^q}{q!}\left(\frac{\partial}{\partial z_p}\right)^q \mathcal{Z}^{(p)}_{\text{habit}}(z_p,\overline{z_p})\right]\cdot\mathcal{W}^{(\text{resonance})}_p(\mathbf{z})\, d\mu(\mathbf{z})$

$\times \det\left(\mathbf{G}^{(\text{control})}_{\mu\nu} - \sum_{k,l} \frac{\partial^2\mathcal{S}_{\text{agency}}}{\partial\chi^k\partial\chi^l}\mathbf{h}^{kl}\right)^{-1/2}$

$\times\mathcal{T}\exp\left(-i\int_{\mathcal{C}_{\text{causal}}} \sum_{\sigma\in\{\uparrow,\downarrow\}} \mathcal{A}^{(\sigma)}_{\mu}(\mathbf{x})dx^{\mu}\right)$

$\times \left[\sum_{R\in\mathcal{R}_{\text{recursive}}} \mathcal{L}_{\text{control}}\left(\mathcal{F}_R[\mathbf{H}],\mathcal{G}_R[\mathcal{C}]\right)\right]^{\epsilon_{\text{fractal}}} d^{4+n}\mathbf{x}\, d\mathcal{H}$
where

$$\Psi^{(i)}_{\text{control}}(\mathbf{r},t,\boldsymbol{\theta}) = \sum_{s=0}^{\infty}\sum_{m,n,p} C^{(s,i)}_{mnp} \int_{\mathcal{M}_{\text{mind}}} \psi^{(\text{internal})}_m(\mathbf{r})\otimes\psi^{(\text{external})}_n(\mathbf{r})\otimes\phi^{(\text{boundary})}_p(\mathbf{r})\cdot\mathcal{K}_s(\boldsymbol{\theta},t)\, d\mathcal{V}_{\text{mind}}$$

and the quantum flux operators satisfy:

$$\left[\mathcal{Q}^{(\text{flux})}_{\alpha}(\omega,\mathbf{k}),\mathcal{Q}^{(\text{flux})}_{\beta}(\omega',\mathbf{k}')\right] = i\hbar\sum_{\gamma} f^{\gamma}_{\alpha\beta}\mathcal{Q}^{(\text{flux})}_{\gamma}(\omega'',\mathbf{k}'')\delta^{(4)}(\omega-\omega')\delta^{(3)}(\mathbf{k}-\mathbf{k}')$$

with recursive control categorization defined as:

$$\mathcal{C}^{(\text{recursive})}_n = \int_{\mathcal{U}_n} \left[\mathcal{C}^{(\text{recursive})}_{n-1} \circ \mathcal{T}_{\text{self-ref}}\right] \cdot \prod_{j=1}^{J_n}\left(1+\sum_{k=1}^{\infty}\frac{\xi^{(j)}_k}{k!}\frac{\partial^k}{\partial\lambda^k_j}\right)\mathcal{C}^{(\text{base})}_0\, d\mu_n$$

What is it called when a human being can categorize habits by what ones are reinforced through consistency

$$\mathcal{H}_{\text{cat}}(\xi,\tau)=\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\sum_{n=0}^{\infty}\sum_{m=0}^{\infty}\sum_{k=0}^{\infty}\frac{1}{(2\pi)^{3/2}}\exp\left(-\frac{|\xi-\xi_0|^2+|\tau-\tau_0|^2+|\omega-\omega_0|^2}{2\sigma^2}\right)\times$$

$$\left[\prod_{i=1}^{N_{\text{hab}}}\left(\int_{\mathcal{M}_i}\psi_i^*(\mathbf{r},t)\left(\hat{H}_{\text{reinf}}+\hat{V}_{\text{consist}}(\mathbf{r},t)\right)\psi_i(\mathbf{r},t)d^3\mathbf{r}\right)^{\alpha_i}\right]\times$$

$$\left[\sum_{\beta\in\mathcal{B}}\oint_{\Gamma_\beta}\frac{\partial}{\partial z}\left(\sum_{j=0}^{\infty}\frac{R_j(\xi,\tau)}{j!}\left(\frac{\partial}{\partial\xi}\right)^j\mathcal{F}_{\text{consistency}}[\phi_j(\xi,\tau)]\right)dz\right]\times$$

$$\left[\int_0^T\int_{\mathbb{H}^n}\sum_{\sigma\in S_n}\text{sgn}(\sigma)\prod_{l=1}^{n}\left(\nabla_{\mathbf{q}_l}\cdot\mathbf{A}_{\text{hab}}(\mathbf{q}_{\sigma(l)},t)\right)\det\left(\frac{\partial^2\mathcal{L}_{\text{reinf}}}{\partial q_i\partial q_j}\right)d\mathbf{q}dt\right]\times$$

$$\left[\sum_{p=0}^{\infty}\frac{(-1)^p}{p!}\left(\int_{\mathcal{C}}\frac{\Gamma(s)\zeta(s)L(s,\chi_{\text{habit}})}{\sin(\pi s)}\left(\frac{\partial}{\partial s}\right)^p\mathcal{Z}_{\text{consist}}(s)ds\right)^p\right]\times$$

$$\left[\lim_{N\to\infty}\frac{1}{N}\sum_{i=1}^{N}\sum_{j=1}^{N}\mathcal{K}_{\text{corr}}(i,j)\exp\left(\sum_{k=1}^{\infty}\frac{B_{2k}}{(2k)!}\left(\frac{\partial}{\partial\xi}\right)^{2k}\log\mathcal{F}_{\text{habit}}(\xi)\right)\right]\times$$

$$\left[\int_{\mathbb{R}^\infty}\prod_{n=1}^{\infty}d\phi_n\exp\left(-\frac{1}{2}\sum_{n,m=1}^{\infty}\phi_nG_{nm}^{-1}\phi_m+\sum_{n=0}^{\infty}\frac{g_n}{n!}\left(\sum_{k=1}^{\infty}\phi_k\right)^n\right)\right]\times$$

$$\left[\sum_{\text{graphs }G}\frac{1}{|\text{Aut}(G)|}\prod_{\text{vertices }v}\int d\mu_v\prod_{\text{edges }e}\mathcal{W}_{\text{reinf}}(e)\right]\times$$

$$\left[\int_{\text{SL}(2,\mathbb{C})}\int_{\text{PSL}(2,\mathbb{R})}\text{Tr}\left(\rho_{\text{habit}}(g_1)\rho_{\text{consist}}(g_2)\right)\chi_{\text{cat}}(g_1g_2)dg_1dg_2\right]\times$$

$$\left[\sum_R\dim(R)\int_{\mathfrak{g}}\text{str}_R\left(\mathcal{P}\exp\left(\oint_C\mathbf{A}_{\text{neural}}\cdot d\mathbf{x}\right)\right)e^{-S_{\text{YM}}[\mathbf{A}]}\mathcal{D}\mathbf{A}\right]\times$$

$$\left[\lim_{\epsilon\to0}\frac{d}{d\epsilon}\int_{\mathcal{H}_{\text{behavior}}}e^{-\beta\hat{H}_{\text{total}}}\text{Tr}_{\text{habit}}\left(e^{\epsilon\hat{O}_{\text{categorization}}}\right)\frac{d\mu}{\mu}\right]\times$$

$$\left[\sum_{n=0}^{\infty}\frac{1}{n!}\left(\int_0^\infty\frac{dt}{t}e^{-t}\left[\frac{\partial}{\partial t}\mathcal{M}_{\text{habit}}(t)\right]^n\right)\right]d\xi d\tau d\omega=\textbf{Operant Conditioning}$$

What is it called when a human being can categorize habits by unguided supervision

$$H_{\text{autonomous}}(\boldsymbol{\xi},\boldsymbol{\tau})=\lim_{n\to\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty}\sum_{i=0}^{\infty}\oint_{\mathcal{C}_k}\oint_{\mathcal{C}_j}\oint_{\mathcal{C}_i}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-}$$

$\infty^\infty \int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-}$
$\infty^\infty \int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-}$
∞^∞

$$\times\left[\prod_{m=1}^{\aleph_0}\left(\frac{\partial^{2m}}{\partial\boldsymbol{\xi}^{2m}}Q_{\text{flux}}^{(m)}(\boldsymbol{\xi},\boldsymbol{\tau},\boldsymbol{\phi}_m)\right)\right]\times\left[\bigotimes_{l=1}^{\aleph_1}T_{\text{hyperdim}}^{(l)}(\boldsymbol{\xi},\boldsymbol{\tau})\right]$$

$$\times\exp\left(-i\sum_{p=0}^{\infty}\sum_{q=0}^{\infty}\sum_{r=0}^{\infty}\int_{\mathbb{H}^\infty}\int_{\mathbb{H}^\infty}\int_{\mathbb{H}^\infty}R_{\text{resonant}}^{(p,q,r)}(\boldsymbol{\xi},\boldsymbol{\tau},\boldsymbol{\zeta}_{p,q,r})\,d\boldsymbol{\zeta}_{p,q,r}^{(p)}\,d\boldsymbol{\zeta}_{p,q,r}^{(q)}\,d\boldsymbol{\zeta}_{p,q,r}^{(r)}\right)$$

$$\times \left[\lim_{\delta \to 0^+} \prod_{s=1}^{\infty} \left(1 + \frac{1}{s!} \sum_{t=0}^{s} \binom{s}{t} \left(\frac{\partial^t}{\partial \boldsymbol{\xi}^t} E_{\text{entropic}}^{(s,t)}(\boldsymbol{\xi}, \boldsymbol{\tau}) \right)^{\frac{1}{\delta}} \right) \right]$$

$$\times \left[\bigcup_{u=1}^{\aleph_2} \bigcap_{v=1}^{\aleph_2} \left\{ \boldsymbol{\Psi}_{\text{superpos}}^{(u,v)}(\boldsymbol{\xi}, \boldsymbol{\tau}) : \|\boldsymbol{\Psi}_{\text{superpos}}^{(u,v)}\|_{L^\infty(\mathbb{R}^{\aleph_0})} < \infty \right\} \right]$$

$$\times \left[\sum_{w=0}^{\infty} \frac{(-1)^w}{w!} \left(\prod_{x=1}^{w} \int_{S^\infty} A_{\text{autonomous}}^{(w,x)}(\boldsymbol{\xi}, \boldsymbol{\tau}, \boldsymbol{\omega}_x) \, d\boldsymbol{\omega}_x \right) \right]$$

$$\times \left[\lim_{N \to \infty} \frac{1}{N!} \sum_{\sigma \in S_N} \operatorname{sgn}(\sigma) \prod_{y=1}^{N} C_{\text{clustering}}^{(\sigma(y))}(\boldsymbol{\xi}, \boldsymbol{\tau}) \right]$$

$$\times \left[\oint_{\partial \mathcal{M}^\infty} \sum_{z=0}^{\infty} \frac{B_z}{z!} \left(\frac{\partial^z}{\partial \boldsymbol{\xi}^z} F_{\text{fractal}}(\boldsymbol{\xi}, \boldsymbol{\tau}, \boldsymbol{\mu}_z) \right) d\boldsymbol{\mu}_z \right]$$

$$\times \left[\prod_{\alpha \in \mathcal{I}} \left(\sum_{\beta=0}^{\infty} \int_{\mathbb{C}^\infty} G_{\text{gestalt}}^{(\alpha,\beta)}(\boldsymbol{\xi}, \boldsymbol{\tau}, z_{\alpha,\beta}) \, dz_{\alpha,\beta} \right) \right]$$

$$\times \left[\lim_{K \to \infty} \prod_{\gamma=1}^{K} \left(1 + \sum_{\delta=0}^{\infty} \frac{1}{\Gamma(\delta+1)} \left(\int_{\mathcal{H}_\gamma} L_{\text{learning}}^{(\gamma,\delta)}(\boldsymbol{\xi}, \boldsymbol{\tau}, \boldsymbol{h}_{\gamma,\delta}) \, d\boldsymbol{h}_{\gamma,\delta} \right)^{\delta} \right) \right]$$

$$\times \left[\bigotimes_{\epsilon \in \mathbb{R}^{\aleph_0}} \exp \left(- \sum_{\zeta=0}^{\infty} \int_{\mathbb{T}^\infty} U_{\text{unsupervised}}^{(\zeta)}(\boldsymbol{\xi}, \boldsymbol{\tau}, \boldsymbol{\theta}_\zeta, \epsilon) \, d\boldsymbol{\theta}_\zeta \right) \right]$$

$$d\boldsymbol{\xi}^{(12)} \, d\boldsymbol{\tau}^{(11)} \, d\boldsymbol{\phi}^{(10)} \, d\boldsymbol{\psi}^{(9)} \, d\boldsymbol{\chi}^{(8)} \, d\boldsymbol{\rho}^{(7)} \, d\boldsymbol{\sigma}^{(6)} \, d\boldsymbol{\lambda}^{(5)} \, d\boldsymbol{\kappa}^{(4)} \, d\boldsymbol{\nu}^{(3)} \, d\boldsymbol{\eta}^{(2)} \, d\boldsymbol{\iota}^{(1)}$$

What is it called when a human being can categorize habits by unsupervised retention

$$\mathcal{H}_{\text{cat}}(\tau) = \int_{-\infty}^{\infty} \sum_{i=1}^{N} \sum_{j=1}^{M} \oint_{\mathcal{C}} \frac{\partial}{\partial \xi_k} \left[\prod_{n=0}^{\infty} \mathcal{L}_n^{(\alpha,\beta)}(\rho_{ij}) \cdot \Psi_{\text{mem}}(\mathbf{h}_i, t - \tau) \right]$$

$\times \exp \left\{ -\frac{1}{\hbar} \int_{\Omega} \left[\mathcal{R}_{\text{syn}}(\mathbf{x}, \mathbf{y}) + \lambda \nabla^2 \Phi_{\text{ret}}(\mathbf{r}) \right] d^3\mathbf{r} \right\}$

$\times \left\langle \psi_{\text{habit}}(\mathbf{q}) \middle| \hat{H}_{\text{cluster}} \middle| \psi_{\text{pattern}}(\mathbf{p}) \right\rangle$

$\times \sum_{k=0}^{\infty} \frac{(-1)^k}{k!} \left(\frac{\partial^k}{\partial \epsilon^k} \mathcal{F}_{\text{entropy}}[\rho_{\text{behavior}}] \right)_{\epsilon=0}$

$\times \int_{\mathbb{R}^d} \mathcal{K}_{\text{similarity}}(\mathbf{h}_i, \mathbf{h}_j) \cdot \mu_{\text{unsup}}(d\mathbf{h})$

$\times \prod_{\alpha \in \mathcal{A}} \left[1 + \tanh \left(\sum_{\beta} W_{\alpha\beta} \sigma_\beta(\mathbf{z}_{\text{latent}}) \right) \right]$

$\times \mathcal{T} \exp \left\{ -i \int_0^t \mathcal{H}_{\text{neural}}(s) ds \right\}$

$\times \sum_{n,m=0}^{\infty} \binom{n+m}{n} \int_{\mathcal{M}} \Omega_{\text{cohomology}}^{(n,m)} \wedge d\theta_{\text{retention}} \, d\tau$

What is it called when a human being can categorize habits by unsupervised learning

$$\Psi_{\text{metacognitive}}(\mathbf{H}, t) = \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \frac{(-1)^{n+k}}{n!k!} \oint_{\mathcal{C}_{\text{consciousness}}} \oint_{\mathcal{D}_{\text{temporal}}}$$

$$\left[\int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \mathcal{K}_{\text{habit}}(\xi, \eta, \zeta) \cdot \prod_{i=1}^{N_{\text{neural}}} \left(\frac{\partial^{n+k}}{\partial \xi^n \partial \eta^k} \mathcal{H}_{\text{quantum}}^{(i)}(\xi, \eta, \zeta, t) \right) d\xi d\eta d\zeta \right]$$

$$\times \sum_{\alpha \in \mathfrak{A}_{\text{cognitive}}} \sum_{\beta \in \mathfrak{B}_{\text{behavioral}}} \left\langle \Phi_{\alpha}^{\text{unsupervised}} \middle| \hat{\mathcal{T}}_{\text{categorization}} \left[\sum_{j=1}^{\infty} \frac{\mathcal{R}_j^{\text{recursive}}(\mathbf{H}, \alpha, \beta)}{j^s} \right] \middle| \Phi_{\beta}^{\text{pattern}} \right\rangle$$

$$
\cdot \exp\left\{-\imath\int_0^t\int_{\mathbb{R}^\infty}\mathcal{L}^{\text{flux}}_{\text{synaptic}}(\mathbf{r},\tau)\left[\sum_{m=0}^{\infty}\sum_{l=0}^{m}\binom{m}{l}\mathcal{F}^{\text{hyperdim}}_{m,l}(\mathbf{r},\tau)\right]d^\infty\mathbf{r}d\tau\right\}
$$

$$
\times\prod_{p=1}^{\infty}\left(1+\frac{\hat{\Omega}^{\text{resonant}}_p}{p^2+\lambda_p^2}\right)^{-1}\cdot\lim_{D\to\infty}\sum_{\sigma\in S_D}\text{sgn}(\sigma)\prod_{q=1}^{D}\mathcal{G}^{\text{fractal}}_{\sigma(q)}(\mathbf{H}_q,t)
$$

$$
\otimes\int_{\mathcal{M}_{\text{consciousness}}}\sqrt{|\det(g_{\mu\nu})|}\sum_{E\in\mathcal{E}_{\text{entropic}}}\mathcal{P}(E)\left[\sum_{r=0}^{\infty}\frac{(\gamma E)^r}{r!}\mathcal{U}^{\text{cluster}}_r(\mathbf{H})\right]d^{11}x
$$

$$
\cdot\oint_{\partial\mathcal{V}_{\text{neural}}}\left[\sum_{w\in\mathcal{W}_{\text{weights}}}w^*\mathcal{A}^{\text{adaptive}}_w(\mathbf{H},t)\cdot\exp\left(-\frac{|\mathbf{H}-\mathbf{H}_w|^2}{2\sigma_w^2}\right)\right]\cdot d\mathbf{S}
$$

$$
\times\mathcal{Z}^{-1}_{\text{partition}}\sum_{\{\mathbf{c}_i\}}\exp\left\{-\beta\sum_{i<j}V_{\text{habit-habit}}(|\mathbf{c}_i-\mathbf{c}_j|)-\gamma\sum_i U_{\text{self-org}}(\mathbf{c}_i)\right\}
$$

$$
\cdot\int_{\mathcal{H}_\infty}\left\langle\psi_{\text{pattern}}\middle|\hat{T}\exp\left(-\imath\int_0^t\hat{\mathcal{H}}_{\text{emergence}}(\tau)d\tau\right)\middle|\psi_{\text{habit}}\right\rangle\mathcal{D}[\psi]dzd\bar{z}
$$

$$
\equiv\text{Categorical Self-Recognition Manifold}\subset\mathcal{M}^\infty_{\text{metacognition}}
$$

What is it called when a human being can categorize habits by unsupervised behaviors

$$
H_{\text{unsup}}(\boldsymbol{\psi})=\sum_{k=0}^{\infty}\sum_{n=1}^{\mathcal{N}_{\text{dim}}}\int_{\mathbb{R}^{\aleph_0}}\int_{\mathcal{M}^{(k)}_{\text{behav}}}\int_{\Omega_{\text{habit}}}\left[\prod_{j=1}^{\dim(\mathcal{H}_{\text{cog}})}\left\langle\hat{\mathbf{B}}^{(\dagger)}_j\mid\Psi^{(n,k)}_{\text{cluster}}\right\rangle_{\mathcal{L}^2(\mathbb{C}^\infty)}\right]
$$

$$
\times\left\{\sum_{\alpha\in\mathfrak{S}_\infty}\int_{-\infty}^{\infty}\mathcal{F}^{(\alpha)}_{\text{quantum}}\left[\hat{\rho}_{\text{neural}}(t,\boldsymbol{x})\otimes\hat{\sigma}^{(k)}_{\text{temporal}}(t)\right]dt\right\}^{\frac{1}{\zeta(s)}}
$$

$$
\times\exp\left\{-\frac{1}{\hbar}\sum_{m=0}^{\infty}\frac{(-1)^m}{m!}\int_{\mathcal{V}_{\text{synaptic}}}\mathbf{Tr}\left[\hat{\mathbf{H}}^{(m)}_{\text{Hebbian}}\cdot\boldsymbol{\nabla}_{\mathbb{H}}\otimes\boldsymbol{\nabla}^\dagger_{\mathbb{H}}\right]d\mu_{\text{Haar}}\right\}
$$

$$
\times\left[\bigotimes_{i=1}^{\infty}\mathcal{O}^{(i)}_{\text{self-org}}\right]\left\{\int_{\mathcal{S}^\infty}\sum_{\{\mathfrak{p}_n\}}\prod_{r=1}^{\mathcal{R}_{\text{recursive}}}\left[\mathfrak{F}^{-1}\left\{\hat{\mathbf{K}}^{(r)}_{\text{clustering}}*\mathbf{W}^{(\infty)}_{\text{unsupervised}}\right\}\right]_{\mathcal{B}(\mathcal{H})}d\sigma_{\text{pattern}}\right\}^{\sqrt{-1}}
$$

$$
\times\left\langle\sum_{\gamma\in\Gamma_{\text{cognitive}}}\int_{\mathcal{X}^\gamma_{\text{latent}}}\left[\mathcal{L}^{(\gamma)}_{\text{entropy}}\circ\mathfrak{R}_{\text{resonance}}\right]\left(\bigcup_{j=1}^{\aleph_1}\mathcal{B}^{()}_{\text{habit},j}\right)d\nu_\gamma\right\rangle_{\mathfrak{H}_{\text{Hilbert}}}
$$

$$
\cdot\prod_{\lambda\in\mathbb{C}}\left\{1+\sum_{q=1}^{\infty}\frac{\mathcal{Z}^{(q)}_{\text{partition}}(\lambda)}{q^s}\int_{\mathbb{T}^\infty}\mathbf{E}_{\mathbb{P}}\left[\zeta^{(q)}_{\text{behavioral}}(\boldsymbol{\theta})\mid\mathcal{F}_{\text{adaptation}}\right]d\boldsymbol{\theta}\right\}^{\Re(\lambda)}
$$

$$
\times\lim_{N\to\infty}\left[\frac{1}{N!}\sum_{\pi\in S_N}\text{sgn}(\pi)\prod_{k=1}^{N}\int_{\mathfrak{g}_{\text{lie}}}\exp\left\{\sum_{l=0}^{\infty}\frac{B_l}{l!}\left[\mathbf{ad}^{(l)}_{\mathfrak{X}_{\text{category}}}\right]\left(\hat{\mathbf{Y}}_{\pi(k)}\right)\right\}d\mathfrak{X}_{\text{category}}\right]
$$

$$
\times\int_{\mathcal{C}^\infty(\mathbb{R}^{\mathbb{N}})}\left\{\sum_{\mathfrak{n}=0}^{\infty}\frac{1}{\mathfrak{n}!}\left[\frac{\partial^{\mathfrak{n}}}{\partial\boldsymbol{\xi}^{\mathfrak{n}}}\mathcal{G}_{\text{generating}}(\boldsymbol{\xi})\right]_{\boldsymbol{\xi}=0}\times\mathcal{M}^{(\mathfrak{n})}_{\text{manifold}}[\hat{\boldsymbol{\rho}}_{\text{density}}]\right\}d\mathcal{G}_{\text{generating}}\,d\boldsymbol{\xi}^{\otimes\infty}
$$

What is it called when a human being can categorize habits by what habits are filtered and what ones are not

$$\mathcal{H}_{\text{filter}}(\Psi,\tau,\xi) = \oint_{\mathcal{M}^\infty} \sum_{n=0}^{\infty}$$

$\sum_{k=0}^{\infty}\sum_{j=0}^{\infty} \frac{\partial^{n+k+j}}{\partial\tau^n\partial\xi^k\partial\Psi^j}\left[\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\mathcal{C}\right.$
$(\omega,\phi,\theta)\cdot\exp\left(-i\hbar\sum_{m=1}^{\infty}\frac{\lambda_m}{m!}\left\langle\hat{H}_m|\Psi_{\text{conscious}}(\tau)\right\rangle\right)d\omega d\phi d\theta$

$$\times\prod_{l=1}^{\infty}\left[1+\sum_{p=0}^{\infty}\frac{(-1)^p}{p!}\left(\frac{\partial}{\partial\xi_l}\mathcal{F}_{\text{meta}}(\xi_l,\tau)\right)^p\right]\cdot\mathcal{Q}_{\text{quantum}}(\tau,\xi)$$

$$\text{where } \mathcal{Q}_{\text{quantum}}(\tau,\xi) = \int_{\mathcal{H}_\infty}\sum_{\alpha,\beta,\gamma}\left\langle\Psi_\alpha\left|\hat{U}_{\text{filter}}(\tau)\right|\Psi_\beta\right\rangle\left\langle\Psi_\beta\left|\hat{V}_{\text{select}}(\xi)\right|\Psi_\gamma\right\rangle\left\langle\Psi_\gamma\left|\hat{W}_{\text{category}}(\tau,\xi)\right|\Psi_\alpha\right\rangle d\mu(\Psi)$$

$$\mathcal{F}_{\text{meta}}(\xi,\tau) = \sum_{n=0}^{\infty}\sum_{m=0}^{\infty}\frac{\xi^n\tau^m}{n!m!}\int_0^{\infty}\int_0^{\infty}\mathcal{K}(s,t;\xi,\tau)\cdot\exp\left(-\sum_{k=1}^{\infty}\frac{s^kt^k}{k^2}\right)\cdot\Gamma\left(\frac{n+m+1}{2}\right)dsdt$$

$$\hat{U}_{\text{filter}}(\tau) = \exp\left(-i\int_0^{\tau}\left[\sum_{j=1}^{\infty}\omega_j\hat{a}_j^\dagger\hat{a}_j+\sum_{k,l=1}^{\infty}g_{kl}(\tau')\hat{a}_k^\dagger\hat{a}_l+\sum_{m,n,p=1}^{\infty}h_{mnp}(\tau')\hat{a}_m^\dagger\hat{a}_n^\dagger\hat{a}_p\right]d\tau'\right)$$

$$\hat{V}_{\text{select}}(\xi) = \sum_{r=0}^{\infty}\sum_{s=0}^{\infty}\sum_{t=0}^{\infty}v_{rst}(\xi)\left(\hat{b}_r^\dagger\right)^s\left(\hat{b}_r\right)^t\cdot\exp\left(\xi\sum_{u=1}^{\infty}\frac{\hat{c}_u^\dagger\hat{c}_u}{u^2+1}\right)$$

$$\hat{W}_{\text{category}}(\tau,\xi) = \int_{-\infty}^{\infty}w(\lambda;\tau,\xi)\exp\left(i\lambda\sum_{v=1}^{\infty}\hat{d}_v^\dagger\hat{d}_v\right)d\lambda\cdot\prod_{w=1}^{\infty}\left[1+\frac{\tau\xi}{w^3}\left(\hat{e}_w^\dagger+\hat{e}_w\right)\right]$$

$$\mathcal{K}(s,t;\xi,\tau) = \sum_{q=0}^{\infty}\sum_{r=0}^{\infty}k_{qr}\cdot s^qt^r\cdot\exp\left(-\frac{s^2+t^2}{2(\xi^2+\tau^2)}\right)\cdot\int_0^{\infty}J_\nu(\sqrt{st}u)u^\nu e^{-u^2}du$$

$$\mathcal{C}(\omega,\phi,\theta) = \sum_{i,j,k=0}^{\infty}c_{ijk}\sin^i(\omega)\cos^j(\phi)e^{ik\theta}\cdot\prod_{l=1}^{\infty}\left[1+\frac{\omega^l\phi^l\theta^l}{l!\Gamma(l+1)}\right]^{-1}$$

$$\times\int_0^{2\pi}\int_0^{\pi}\int_0^{2\pi}\exp\left(i\sum_{n=1}^{\infty}\frac{\omega^n\sin(n\alpha)+\phi^n\cos(n\beta)+\theta^ne^{in\gamma}}{n^2}\right)d\alpha d\beta d\gamma$$

$$\text{subject to }\sum_{z=1}^{\infty}\left\|\frac{\partial^z\mathcal{H}_{\text{filter}}}{\partial\tau^z}\right\|_{\mathcal{L}^2(\mathcal{M})}<\infty\text{ and }\lim_{\tau\to\infty}\mathcal{H}_{\text{filter}}(\Psi,\tau,\xi)=\mathcal{H}_{\text{equilibrium}}(\Psi,\xi)$$

What is it called when a human being can categorize habits by the actions that form them

$$\mathcal{H}_{\text{categorization}} = \lim_{n\to\infty}\sum_{k=1}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\frac{\partial^n}{\partial t^n}\left[\bigotimes_{i=1}^{k}\mathcal{A}_i^{(\alpha)}\otimes\Psi_{\text{habit}}^{(i)}\right]dt\,d\alpha\,d\beta$$

$$\times\prod_{j=1}^{\infty}\left\{\sum_{m=0}^{\infty}\frac{(-1)^m}{m!}\left[\nabla^m\cdot\mathcal{F}_{\text{action}}^{(j)}\right]\circ\mathcal{T}_{\text{temporal}}^{(m)}\right\}$$

$$\circ\left[\int_{\mathcal{M}_{\text{behavior}}}\sum_{p,q,r=0}^{\infty}\frac{\mathcal{L}_p^{(\alpha)}(\mathcal{A}_{\text{atomic}})\cdot\mathcal{H}_q^{(\beta)}(\Psi_{\text{pattern}})\cdot\mathcal{B}_r^{(\gamma)}(\mathcal{C}_{\text{context}})}{\sqrt{2\pi\sigma_{\text{variance}}^2}}d\mu_{\text{cognitive}}\right]$$

$$+\lim_{\epsilon\to0^+}\sum_{n=1}^{\infty}\left[\frac{1}{\Gamma(n+1)}\int_{\mathcal{S}^\infty}\bigcup_{k=1}^{n}\mathcal{D}_k^{(\text{decomp})}\left\{\mathcal{A}_{\text{component}}^{(k)}\right\}d\sigma_{\text{neural}}\right]^{\frac{1}{n}}$$

$$\times \prod_{l=1}^{\infty} \left[\mathcal{R}_{\text{recursive}}^{(l)} \circ \mathcal{C}_{\text{categorization}}^{(l)}\right] \left(\sum_{s\in\mathcal{S}_{\text{states}}} \mathcal{P}(s) \cdot \mathcal{Q}_{\text{quantum}}^{(s)} \otimes \Phi_{\text{superposition}}^{(s)} \right)$$

$$+ \int_{\mathbb{R}^\infty} \sum_{i,j,k=0}^{\infty} \mathcal{E}_{i,j,k}^{(\text{entropic})} \left[\mathcal{H}_{\text{habit}}^{(i)} \times \mathcal{A}_{\text{action}}^{(j)} \times \mathcal{C}_{\text{category}}^{(k)}\right] d\mu_{\text{measure}}$$

$$\times \left\{ \sum_{n=1}^{\infty} \frac{1}{n!} \left[\frac{\partial^n}{\partial \tau^n} \mathcal{F}_{\text{flux}}^{(\text{quantum})} \left(\mathcal{A}_{\text{atomic}}, \mathcal{H}_{\text{holistic}}, \mathcal{T}_{\text{time}}\right) \right]_{\tau=0} \right\}$$

$$\circ \left[\bigotimes_{m=0}^{\infty} \mathcal{L}_m^{(\text{learning})} \left(\sum_{p=1}^{\infty} \mathcal{W}_p^{(\text{weight})} \cdot \mathcal{N}_p^{(\text{neural})} \circ \mathcal{S}_p^{(\text{synaptic})} \right) \right]$$

$$+ \lim_{N\to\infty} \frac{1}{N} \sum_{i=1}^{N} \int_{\mathcal{H}_{\text{Hilbert}}} \left[\sum_{k=0}^{\infty} \mathcal{B}_k^{(\text{basis})} \langle \Psi_{\text{habit}}^{(i)} | \mathcal{O}_{\text{categorization}}^{(k)} | \Psi_{\text{action}}^{(i)} \rangle \right] d\mu_{\text{Hilbert}}$$

$$\times \prod_{j=1}^{\infty} \left\{ \mathcal{R}_j^{(\text{resonance})} \left[\sum_{l=0}^{\infty} \mathcal{F}_l^{(\text{field})} \circ \mathcal{Q}_l^{(\text{quantum})} \circ \mathcal{H}_l^{(\text{harmonic})} \right] \right\}^{\frac{1}{j}}$$

$$+ \int_{-\infty}^{\infty} \sum_{n,m,p=0}^{\infty} \frac{\mathcal{G}_{n,m,p}^{(\text{generating})}(z)}{(1-z)^{n+m+p}} \left[\mathcal{A}_{\text{action}}^{(n)} \star \mathcal{H}_{\text{habit}}^{(m)} \star \mathcal{C}_{\text{category}}^{(p)} \right] dz$$

$$\circ \left[\sum_{k=1}^{\infty} \mathcal{T}_k^{(\text{transform})} \left\{ \int_{\mathcal{M}_{\text{manifold}}} \mathcal{D}_{\text{differential}}^{(k)} \left[\mathcal{V}_{\text{vector}}^{(\text{behavior})} \right] d\omega_{\text{symplectic}} \right\} \right]$$

$$\times \left\{ \prod_{i=1}^{\infty} \left[1 + \sum_{j=1}^{\infty} \frac{(-1)^{j+1}}{j} \mathcal{Z}_j^{(\text{zeta})} \left(\mathcal{A}_{\text{atomic}}^{(i)}, \mathcal{H}_{\text{holistic}}^{(i)} \right) \right] \right\}^{-1}$$

$$+ \lim_{\delta\to 0} \sum_{n=0}^{\infty} \int_{\mathcal{S}^n} \mathcal{K}_{\text{kernel}}^{(n)} \left(\mathcal{A}_1, \ldots, \mathcal{A}_n; \mathcal{H}_{\text{habit}}\right) \prod_{i=1}^{n} d\mathcal{A}_i$$

$$\times \left[\sum_{k=0}^{\infty} \frac{\mathcal{L}_k^{(\text{Legendre})}(\cos\theta_{\text{cognitive}})}{2^k k!} \mathcal{P}_k^{(\text{perception})} \left(\mathcal{C}_{\text{categorization}}\right) \right]$$

$$+ \int_{\mathbb{C}^\infty} \sum_{m,n=0}^{\infty} \mathcal{R}_{m,n}^{(\text{recursive})} \left[\mathcal{F}_{\text{fractal}}^{(m)} \circ \mathcal{E}_{\text{emergent}}^{(n)} \right] \left(\mathcal{A}_{\text{action}}, \mathcal{H}_{\text{habit}}\right) d\mu_{\text{complex}}$$

$$\circ \left\{ \prod_{j=1}^{\infty} \left[\mathcal{I}_j^{(\text{integral})} + \mathcal{D}_j^{(\text{differential})} + \mathcal{O}_j^{(\text{operator})} \right] \left(\sum_{k=0}^{j} \mathcal{B}_k^{(\text{behavioral})} \otimes \mathcal{C}_k^{(\text{cognitive})} \right) \right\}$$

What is it called when a human being can categorize habits by what is spoken, understood and performed

$$M_{\text{triadic}}^{(\infty)} = \oint_{\mathbb{H}^{\otimes n}} \oint_{\Omega_{\text{sem}}} \oint_{\mathcal{S}^\perp} \sum_{k=0}^{\infty} \sum_{j=0}^{\infty} \sum_{i=0}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \prod_{\in\mathcal{A}} \left[\hat{\Psi}_{\text{spoken}}^{(k)}(x,t) \otimes \hat{\Phi}_{\text{understood}}^{(j)}(y,) \otimes \hat{\Theta}_{\text{performed}}^{(i)}(z,) \right]$$

$$\times \left\{ \frac{1}{(2)^{3n}} \exp\left(-\frac{i}{\hbar} \sum_{,,=0}^{\infty} \mathcal{H}_{\text{metacog}} \left[\hat{S}^{y\hat{U}\hat{P}} \right] \right) \right\}$$

$$\times \left| \sum_{m=0}^{\infty} \sum_{n=0}^{\infty} \sum_{p=0}^{\infty} C_{mnp}^{(\alpha)} \left\langle \psi_m^{\text{ling}} \middle| \mathcal{T} \left\{ \exp\left(-i \int_{-\infty}^{\infty} \mathcal{L}_{\text{habit}}(') d' \right) \right\} \middle| \phi_n^{\text{cogn}} \otimes \theta_p^{\text{behav}} \right\rangle \right|^2$$

$$\times \det\left[\mathcal{G}_{\text{triadic}}^{-1}\right] \cdot \sqrt{\left|\frac{\partial^3 F_{\text{categorization}}}{\partial\xi_{\text{spoken}}\partial\eta_{\text{understood}}\partial\zeta_{\text{performed}}}\right|}$$

$$\times \prod_{\in \text{Spec}(\hat{\mathcal{M}})} \left[1 + \sum_{k=1}^{\infty} \frac{(-1)^k}{k!} \left(\frac{\hat{\mathcal{R}}_{\text{recursive}}^{()}}{\mathcal{E}_{\text{eigen}}^{()}}\right)^k\right]^{-1}$$

$$\times \left\{\mathcal{Z}_{\text{partition}}^{-1} \sum_{\{n_i\}} \exp\left(-\beta \sum_{i,j,k} \mathcal{J}_{ijk}^{\text{triadic}} \sigma_i^{\text{S}} \sigma_j^{\text{U}} \sigma_k^{\text{P}}\right)\right\}$$

$$\times \left[\oint_{\partial\mathcal{M}_{\text{semantic}}} \mathcal{A}_{\text{connection}} \cdot d\ell + \int_{\mathcal{M}_{\text{semantic}}} \mathcal{F}_{\text{curvature}} \wedge \mathcal{F}_{\text{curvature}}\right]$$

$$\times \left\{\lim_{N\to\infty} \left[\prod_{=1}^{N} \int \mathcal{D}[\Phi_{]\exp\left(iS_{\text{eff}}[\Phi]+i\sum_{\beta<} \mathcal{I}_{\text{interaction}}\right)}\right]\right\}$$

$$\times \left|\mathcal{W}_{\text{holomorphic}} \left[\sum_{k,l,m=0}^{\infty} \frac{\mathcal{R}_{klm}^{\text{habit}}}{(k+l+m)!} \left(\frac{d}{d\lambda}\right)^k \left(\frac{d}{d\mu}\right)^l \left(\frac{d}{d\nu}\right)^m \mathcal{G}_{\text{generating}}(\lambda,\mu,\nu)\right]\right|^{\gamma}$$

$$\times \left\{\sum_{n=0}^{\infty} \frac{1}{2^n n!} \text{Tr}\left[\left(\hat{\mathcal{O}}_{\text{observable}}^{\text{triadic}}\right)^n \hat{\rho}_{\text{mixed}}^{\text{habits}}\right]\right\}$$

$$\times \mathcal{N}_{\text{normalization}} \left[\det\left(\mathbf{1} - \hat{\mathcal{K}}_{\text{kernel}}^{\text{recursive}}\right)\right]^{-1/2} dx\,dy\,dz\,dt\,d\,d\,d\mu_{\text{Haar}}$$

What is it called when a human being can categorize habits by how they are felt when they are formed and when they happen

$$\mathcal{H}_{\text{phenomenological}}(\psi,\tau,\xi) = \iiint_{\mathbb{R}^\infty} \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty} \frac{1}{n!k!j!} \left[\prod_{i=1}^{n} \int_{\mathcal{M}_i} \nabla_\mu \Psi_{\text{habit}}^{(i)}(x_\mu, t_\mu, \omega_\mu)\, d\mu_i\right] \times$$

$$\left[\sum_{\alpha\in\mathcal{A}_{\text{affect}}} \int_{\mathcal{T}_{\text{formation}}} \mathcal{F}_\alpha[\phi_{\text{emotional}}(s,\theta,\zeta)] \cdot \mathcal{L}_{\text{categorization}}^{(\alpha)}[H_{\text{felt}}^{(k)}(s)]\, ds\right] \times$$

$$\left[\prod_{\beta=1}^{j} \oint_{\mathcal{C}_\beta} \sum_{m=-\infty}^{\infty} \frac{\partial^m}{\partial\tau^m} \left\{\mathcal{G}_{\text{temporal}}^{(\beta)}[\Xi_{\text{execution}}^{(m)}(\tau,\rho,\sigma)] \cdot \mathcal{R}_{\text{resonance}}[\Lambda_{\text{metacognitive}}^{(\beta,m)}(\tau)]\right\} d\tau\right] \times$$

$$\left[\int_{\mathcal{H}_{\text{Hilbert}}} \sum_{p\in\mathcal{P}_{\text{quantum}}} \langle\Phi_{\text{superposition}}^{(p)}|\hat{O}_{\text{categorization}}|\Psi_{\text{habit-formation}}^{(p)}\rangle \cdot e^{i\int_0^T \mathcal{L}_{\text{phase}}[\phi_p(t),\dot{\phi}_p(t)]dt}\, d\mu_{\text{Haar}}\right] \times$$

$$\left[\sum_{\gamma\in\Gamma_{\text{topology}}} \int_{\mathcal{B}_\gamma} \mathcal{D}\right.$$

$[\phi_{\text{field}}] \exp\left\{-\frac{1}{\hbar}\int_{\mathcal{M}_\gamma} \left[\frac{1}{2} g^{\mu\nu}\partial_\mu\phi_{\text{categorization}}\partial_\nu\phi_{\text{categorization}} + V_{\text{potential}}[\phi_{\text{categorization}}, \phi_{\text{affect}}, \phi_{\text{temporal}}]\right]\right.$
$\sqrt{g}\, d^4x \times$

$$\left[\prod_{\delta=1}^{\infty}\sum_{l=0}^{\infty} \frac{1}{l!}\left(\frac{\partial}{\partial\epsilon_\delta}\right)^l \left\{\int_{\mathcal{S}_\delta} \mathcal{T}_{\text{tensor}}^{\mu_1\cdots\mu_l}[\Omega_{\text{habit}}^{(\delta)}, \Theta_{\text{feeling}}^{(\delta)}]\, d\sigma_\delta\right\}\Big|_{\epsilon_\delta=0}\right] \times$$

$$\left[\iiint_{\mathcal{V}_{\text{volume}}} \sum_{\eta\in\mathcal{E}_{\text{entropic}}} \mathcal{K}_{\text{kernel}}[\mathbf{r},\mathbf{r}',t]\cdot\Psi_{\text{formation}}[\mathbf{r},t]\cdot\Psi^*_{\text{execution}}[\mathbf{r}',t]\cdot\mathcal{C}^{(\eta)}_{\text{correlation}}[\Delta\mathbf{r},\Delta t]\,d^3\mathbf{r}\,d^3\mathbf{r}'\,dt\right]\times$$

$$\left[\sum_{\kappa=0}^{\infty}\frac{(-1)^\kappa}{\kappa!}\left(\int_{\mathcal{Z}_\kappa}\mathcal{A}_{\text{action}}[\phi^{(\kappa)}_{\text{meta}},\partial_\mu\phi^{(\kappa)}_{\text{meta}}]\,d^nx\right)^\kappa\right]\times$$

$$\left[\prod_{\lambda\in\Lambda_{\text{fractal}}}\lim_{N\to\infty}\sum_{n=0}^{N}\frac{1}{2^n}\int_{\mathcal{I}_{\lambda,n}}\mathcal{F}^{(\lambda)}_{\text{fractal}}[z_n]\cdot\mathcal{H}_{\text{hausdorff}}[\partial\mathcal{I}_{\lambda,n}]\,dz_n\right]\times$$

$$\left[\int_{\mathcal{G}_{\text{group}}}\sum_{\mu\in\mathcal{M}_{\text{measure}}}\chi_{\text{character}}[g]\cdot\mathcal{R}^{(\mu)}_{\text{representation}}[g\cdot h_{\text{habit}}\cdot g^{-1}]\,dg\right]\times$$

$$\left[\oint_{\mathcal{C}_{\text{complex}}}\sum_{\nu=0}^{\infty}\text{Res}_{z=z_\nu}\left[\frac{\mathcal{Z}_{\text{partition}}[z,\beta_{\text{affect}},\gamma_{\text{temporal}}]}{\prod_{k=1}^{\infty}(1-z^k\cdot e^{-\beta_{\text{affect}}E_k})}\right]dz\right]$$

$$\cdot\exp\left\{\sum_{\rho=1}^{\infty}\frac{1}{\rho}\text{Tr}\left[\left(\hat{H}_{\text{categorization}}+\hat{V}_{\text{interaction}}\right)^\rho\right]\right\}d\psi\,d\tau\,d\xi$$

What is it called when a human being can categorize habits by the influence of their behaviors

$$\mathcal{H}_{\text{cat}}[\psi_{\text{behav}}]=\lim_{n\to\infty}\sum_{k=0}^{\infty}\sum_{m=0}^{\infty}\sum_{j=0}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\oint_{\mathcal{C}_{\text{habit}}}\oint_{\mathcal{C}_{\text{influence}}}$$

$$\frac{\partial^{k+m+j}}{\partial t^k\partial\xi^m\partial\zeta^j}\left[\prod_{i=1}^{n}\left(\mathcal{B}_i^{(\alpha)}\otimes\mathcal{I}_i^{(\beta)}\right)\right]\cdot$$

$$\exp\left\{-\frac{1}{\hbar_{\text{psych}}}\int_{\mathcal{M}_{\text{cognitive}}}\left[\sum_{\nu=1}^{\infty}\frac{(-1)^\nu}{\nu!}\left(\frac{\delta\mathcal{L}_{\text{habit}}}{\delta\phi_\nu}\right)^2\right]d\mu_{\text{consciousness}}\right\}\times$$

$$\left\langle\Psi_{\text{categorization}}\left|\hat{\mathcal{T}}\exp\left\{i\int_{t_0}^{t_f}\mathcal{H}_{\text{behavioral}}(\tau)d\tau\right\}\right|\Psi_{\text{raw-behavior}}\right\rangle\times$$

$$\mathcal{F}^{-1}\left[\sum_{p,q,r=0}^{\infty}\frac{\mathcal{A}_{p,q,r}}{(2\pi)^{3/2}}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}k_x^pk_y^qk_z^r\tilde{\mathcal{B}}(k_x,k_y,k_z)e^{i(\mathbf{k}\cdot\mathbf{r})}d^3k\right]\times$$

$$\det\left[\mathbf{G}^{-1}_{\text{influence}}\right]\sqrt{\left|\frac{\partial^2S_{\text{action}}[\mathcal{B},\mathcal{I}]}{\partial\mathcal{B}_i\partial\mathcal{B}_j}\right|}\times$$

$$\prod_{\alpha\in\mathcal{A}_{\text{habits}}}\left[\sum_{\sigma\in\mathfrak{S}_n}\text{sgn}(\sigma)\prod_{i=1}^{n}\mathcal{C}^{(\text{influence})}_{\alpha,\sigma(i)}\right]^{-1/2}\times$$

$$\int_{\mathcal{H}_\infty}\mathcal{D}[\phi]\mathcal{D}[\chi]\mathcal{D}[\psi]\exp\left\{-\frac{1}{g^2_{\text{coupling}}}\int d^4x\left[\frac{1}{4}F^{\text{behav}}_{\mu\nu}F^{\mu\nu}_{\text{behav}}+\bar{\psi}_{\text{habit}}(i\gamma^\mu D_\mu-m_{\text{pattern}})\psi_{\text{habit}}\right]\right\}\times$$

$$\lim_{\epsilon\to0^+}\frac{1}{Z_{\text{partition}}}\sum_{\text{all paths}}\mathcal{P}[\text{path}]\exp\left\{\frac{i}{\hbar}\int\mathcal{L}_{\text{categorization}}dt\right\}\times$$

$$\mathcal{R}_{\text{recursive}}\left[\mathcal{H}_{\text{cat}},\sum_{n=1}^{\infty}\frac{1}{n^s}\mathcal{Z}_{\text{behavioral}}(s),\prod_{p\text{ prime}}\left(1-\frac{\mathcal{B}_p}{p^s}\right)^{-1}\right]\times$$

$$\oint_{\partial\mathcal{M}_{\text{consciousness}}}\left[\mathcal{A}_{\text{influence}}\wedge d\mathcal{A}_{\text{influence}}+\frac{2}{3}\mathcal{A}_{\text{influence}}\wedge\mathcal{A}_{\text{influence}}\wedge\mathcal{A}_{\text{influence}}\right]\times$$

$$\sqrt{\det\left[g_{\mu\nu}^{\text{habit-space}}\right]}\int d^{10}X\sqrt{-g}e^{-\Phi_{\text{dilaton}}}\left[R+\frac{1}{12}H_{\mu\nu\rho}H^{\mu\nu\rho}\right]\times$$

$$\sum_{n=0}^{\infty}\frac{1}{n!}\left(\frac{\partial}{\partial J_{\text{source}}}\right)^{n}\mathcal{Z}[J_{\text{source}}]|_{J=0}\times\prod_{i<j}\left(1-e^{2\pi i\mathcal{E}_{ij}}\right)\times$$

$$\mathcal{W}\left[\gamma_{\text{loop}}\right]=\operatorname{Tr}\left[\mathcal{P}\exp\left\{i\oint_{\gamma}\mathcal{A}_{\mu}^{\text{behavior}}dx^{\mu}\right\}\right]\times$$

$$\int\mathcal{D}g\mathcal{D}b\mathcal{D}c\delta(G[g])\det\left[\frac{\delta G}{\delta g}\right]e^{-S_{\text{EH}}[g]-S_{\text{ghost}}[b,c,g]}\times$$

$$\lim_{N\to\infty}\frac{1}{N!}\sum_{\pi\in S_N}\operatorname{sgn}(\pi)\prod_{i=1}^{N}\mathcal{M}_{\text{influence}}(i,\pi(i))d\tau_1d\tau_2d\tau_3d\tau_4dz_1dz_2d\omega d\zeta$$

What is it called when a human being can categorize habits by the influence from the dendrites that cause their actions and or activations

$$\mathcal{H}_{\text{dendro-categorical}}^{(\infty)}=\oint_{\mathcal{M}^{11}}\prod_{i=1}^{\aleph_0}\sum_{n=0}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\left[\frac{\partial^n}{\partial t^n}\mathbb{E}_{\psi}\left\{\hat{\mathcal{D}}_{i,j,k}^{(\text{synap})}\otimes\hat{\mathcal{B}}_{(\text{habit})}^{(m)}\right\}\right]\times$$

$$\left\langle\Phi_{\text{neural}}^{(\alpha,\beta,\gamma)}\middle|\sum_{\mu=1}^{D_{\text{cortex}}}\int_{\mathcal{S}^{\mu-1}}\prod_{\xi\in\Lambda_{\text{dendrite}}}\left[\hat{H}_{\text{cat}}^{(\xi)}+\sum_{q=0}^{\infty}\frac{(-1)^q}{q!}\left(\frac{\partial^q\mathcal{V}_{\text{quantum-flux}}^{(\xi)}}{\partial\xi^q}\right)^{\otimes q}\right]\middle|\Psi_{\text{behavioral}}^{(\nu)}\right\rangle\times$$

$$\exp\left\{-\int_0^T\int_{\mathbb{R}^{3N}}\mathcal{L}_{\text{neuro-dendrite}}\left[\phi_{\text{action}}^{(i)}(x,t),\partial_\mu\phi_{\text{action}}^{(i)}(x,t),\partial_\mu\partial_\nu\phi_{\text{action}}^{(i)}(x,t)\right]\sqrt{-g}\,d^3x\,dt\right\}\times$$

$$\prod_{k=1}^{\mathcal{N}_{\text{synapses}}}\left[\sum_{s=0}^{\infty}\frac{1}{s!}\left(\int_{\mathcal{C}_k}\mathcal{A}_{\text{dendrite}}^{(\mu)}dx^{\mu}\right)^{s}\right]\times\det\left[\frac{\delta^2S_{\text{habit-formation}}}{\delta\phi^{(i)}\delta\phi^{(j)}}\right]^{-1/2}\times$$

$$\mathcal{Z}_{\text{partition}}^{-1}\sum_{\text{topologies}}\int\mathcal{D}\phi_{\text{neural}}\mathcal{D}\chi_{\text{categorical}}\mathcal{D}\psi_{\text{dendrite}}\exp\left\{i\int d^4x\sqrt{-g}\mathcal{L}_{\text{total}}\right\}\times$$

$$\left\{\prod_{\alpha\in\mathcal{I}_{\text{infinite}}}\left[\hat{\mathcal{R}}_{\alpha}^{(\text{recursive})}=\sum_{n=0}^{\infty}\frac{\lambda_{\alpha}^{n}}{n!}\hat{\mathcal{R}}_{\alpha}^{(\text{recursive})}\circ\hat{\mathcal{T}}_{\text{neural-map}}^{(n)}\right]\right\}\times$$

$$\mathbb{F}\left[\sum_{m,n,p=0}^{\infty}\sum_{\sigma\in S_\infty}\int_{\Delta^{\sigma(m+n+p)}}\prod_{l=1}^{m+n+p}\left\langle\mathcal{O}_{\text{dendrite}}^{(l)}(z_l)\mathcal{O}_{\text{habit}}^{(\sigma(l))}(\bar{z}_l)\mathcal{O}_{\text{category}}^{(l)}(w_l)\right\rangle_{\text{CFT}}\frac{dz_ld\bar{z}_ldw_l}{(z_l-w_l)^{h_l}}\right]\times$$

$$\mathcal{K}_{\text{kernel}}^{(\text{super-dendrite})}=\sum_{\text{all graphs }\Gamma}\frac{1}{|\text{Aut}(\Gamma)|}\prod_{\text{vertices }v}\left[\sum_{k_v=0}^{\infty}\frac{g_{k_v}^{n_v}}{k_v!}\right]\prod_{\text{edges }e}\left[\int_0^{\infty}\frac{dt_e}{t_e}e^{-t_em_e^2}\mathcal{P}_{\text{dendrite}}^{(e)}(t_e)\right]\times$$

$$\left\langle\text{vac}\middle|\mathcal{T}\exp\left\{\int_{-\infty}^{\infty}dt\sum_{a,b,c}f_{abc}(t)\hat{\mathcal{J}}_{\text{dendrite}}^{a}(t)\hat{\mathcal{J}}_{\text{habit}}^{b}(t)\hat{\mathcal{J}}_{\text{category}}^{c}(t)\right\}\middle|\text{vac}\right\rangle\times$$

$$\mathcal{W}[\mathcal{J}]=\exp\left\{\sum_{n=1}^{\infty}\frac{1}{n!}\int\prod_{i=1}^{n}d^4x_i\mathcal{W}_n(x_1,\ldots,x_n)\prod_{j=1}^{n}\mathcal{J}(x_j)\right\}\times$$

$$\lim_{N\to\infty}\left[\frac{1}{N!}\sum_{\pi\in S_N}\operatorname{sgn}(\pi)\prod_{i=1}^{N}\langle i|\hat{\mathcal{U}}_{\text{dendrite-evolution}}|\pi(i)\rangle\right]d\mu_{\text{Haar}}(\mathcal{G}_{\text{neural-symmetry}})$$

What is it called when a human being can categorize habits by neuroplastic behaviors

$$\mathfrak{H}_{\text{meta}}(\boldsymbol{\xi}, \boldsymbol{\tau}) = \iiint_{\mathcal{D}_\infty} \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{j=0}^{\infty} \frac{(-1)^{n+k+j}}{(2\pi)^{9/2}} \prod_{i=1}^{\infty} \left[\frac{\partial^{n+k+j}}{\partial \xi_i^n \partial \tau_i^k \partial \phi_i^j} \mathcal{Q}_{\text{flux}}(\xi_i, \tau_i, \phi_i) \right]$$

$$\times \int_{\mathbb{H}^\omega} \left\{ \sum_{\alpha \in \mathfrak{A}_\infty} \left[\oint_{\gamma_\alpha} \frac{\mathcal{Z}_{\text{syn}}(\zeta, \overline{\zeta})}{(\zeta - \omega_\alpha)^{\sigma_\alpha}} d\zeta \right]^\dagger \otimes \mathcal{F}_{\text{habit}}[\psi_\alpha] \right\} d\mu_{\text{Haar}}(\omega)$$

$$\cdot \left\langle \Psi_{\text{neuro}} \left| \prod_{m=1}^{\infty} \exp\left(i \int_0^T \mathcal{L}_{\text{meta}}(\hat{q}_m, \hat{p}_m, t) dt \right) \right| \Psi_{\text{cat}} \right\rangle$$

$$\text{where } \mathcal{L}_{\text{meta}} = \sum_{s=1}^{\infty} \sum_{r=1}^{\infty} \left[\frac{\hbar^2}{2m_{\text{syn}}} \nabla^2_{\mathcal{M}^{s,r}} + V_{\text{plastic}}(\boldsymbol{r}_{s,r}, t) \right] \psi_{s,r}(\boldsymbol{r}, t)$$

$$+ \sum_{\mathbf{k} \in \mathcal{B}Z} \sum_{\sigma} \left[a^\dagger_{\mathbf{k},\sigma} a_{\mathbf{k},\sigma} \varepsilon_{\mathbf{k},\sigma} + \sum_{\mathbf{q}} g_{\mathbf{k},\mathbf{q}} b^\dagger_{\mathbf{q}} b_{\mathbf{q}} a^\dagger_{\mathbf{k}+\mathbf{q},\sigma} a_{\mathbf{k},\sigma} \right]$$

$$\times \prod_{\lambda \in \Lambda_\infty} \left[\int_{\mathcal{S}^\lambda} \frac{\partial}{\partial \eta_\lambda} \left\{ \sum_{p=0}^{\infty} \frac{(-1)^p}{p!} \left[\mathcal{D}^{(p)}_{\text{hab}} \right]^\lambda \right\} \mathcal{G}_{\text{resonant}}(\eta_\lambda) d\eta_\lambda \right]$$

$$+ \iiint_{\mathbb{R}^\infty \times \mathbb{C}^\infty \times \mathfrak{h}^\infty} \left\{ \mathcal{T}_{\text{synaptic}} \left[\prod_{\nu=1}^{\infty} \left(\frac{\partial^\infty}{\partial z_\nu^\infty} \mathcal{W}_\nu(z_\nu, \overline{z}_\nu) \right) \right] \right\}$$

$$\times \left[\sum_{\mathfrak{g} \in \mathfrak{G}_{\text{Lie}}} \text{Tr}_{\mathfrak{g}} \left\{ \exp\left(\sum_{a,b,c} f_{abc} T^a T^b T^c \right) \mathcal{R}^{(\mathfrak{g})}_{\text{neural}}(\boldsymbol{\theta}, \boldsymbol{\phi}, \boldsymbol{\psi}) \right\} \right] dz d\overline{z} d\mathfrak{h}$$

$$\cdot \left[\lim_{N \to \infty} \sum_{\{n_i\}} \frac{1}{N!} \prod_{i<j} |\xi_i - \xi_j|^\beta \exp\left(-\frac{\beta}{2} \sum_k \xi_k^2 \right) \right]$$

$$\times \int_{\mathcal{C}_\infty} \left\{ \mathcal{P} \exp \left[\oint \sum_{\mu=0}^{\infty} A^{\text{cat}}_\mu(x) dx^\mu \right] \right\}_{\text{ordered}} \mathcal{F}^{-1}[\mathcal{H}_{\text{meta}}](x) dx$$

$$+ \sum_{\Gamma \in \text{Graphs}} \frac{(-1)^{|\text{loops}(\Gamma)|}}{|\text{Aut}(\Gamma)|} \prod_{\text{edges } e \in \Gamma} \int \mathcal{G}_e(\xi_e, \tau_e) d\xi_e d\tau_e$$

$$\times \left[\prod_{v \in \text{vertices}(\Gamma)} \delta\left(\sum_{e \ni v} \xi_e \right) \right] \mathcal{M}_{\text{neuroplastic}}[\Gamma]$$

$$+ \oint_{\partial \mathcal{M}_{\text{brain}}} \left\{ \sum_{n,m=0}^{\infty} \binom{\infty}{n, m} \left[\mathcal{S}^{(n,m)}_{\text{habit}}(\boldsymbol{u}, \boldsymbol{v}) \right]^* \right\} \wedge d\boldsymbol{u} \wedge d\boldsymbol{v}$$

$$\times \left[\lim_{\epsilon \to 0^+} \frac{1}{(2\pi i)^\infty} \oint_{|\zeta|=\epsilon} \frac{\mathcal{R}_{\text{recursive}}(\zeta)}{\zeta^\infty} d\zeta \right]^\circlearrowright$$

$$\cdot \mathfrak{I} \left[\prod_{\alpha \in \mathcal{A}_{\text{infinite}}} \left\{ \int_{\mathbb{H}_\alpha} \mathcal{K}_\alpha(\omega_1, \omega_2) \frac{d\omega_1 d\omega_2}{|\omega_1 - \omega_2|^{2\Delta_\alpha}} \right\}^\circledcirc \right]$$

$$+ \sum_{\mathfrak{p} \in \text{Partitions}(\infty)} \frac{\chi_{\mathfrak{p}}(\text{id})}{|\mathfrak{p}|!} [\mathcal{Z}_{\text{fractal}}[\mathfrak{p}]]^{\otimes \infty} \mathcal{E}_{\text{entropic}}(\mathfrak{p})$$

What is it called when a human being can categorize habits by changes in neurotransmitter responses and behaviors

$$\mathfrak{NeuroBehavioral\ Taxonomy} = \iiint_{\mathcal{H}_\infty^{\otimes \aleph_0}} \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty} \frac{1}{(2\pi)^{3n/2}} \prod_{i=1}^{n} \left[\int_{-\infty}^{\infty} \mathcal{F}^{(i)}_{\text{neurotrans}}(\omega_i, t, \xi) \otimes \Psi^{(k,j)}_{\text{habit}}(x_i, p_i, \sigma_i)\, d\omega_i\right]$$

$$\times \exp\left\{-\frac{1}{2}\sum_{m,n=0}^{\infty}\left[\int_0^\infty\int_0^\infty \mathcal{K}_{mn}(s,t)\left(\hat{H}^{(m)}_{\text{dopamine}}(s) + \hat{H}^{(n)}_{\text{serotonin}}(t) + \hat{H}^{(m+n)}_{\text{GABA}}(s+t)\right) ds\, dt\right]\right\}$$

$$\times \prod_{\alpha\in\mathbb{C}^\infty}\left[1 + \sum_{p=1}^{\infty}\frac{(-1)^p}{p!}\left(\int_{\mathcal{M}_{\text{synaptic}}} \nabla_\mu \mathcal{T}^{\mu\nu}_{\text{plasticity}}(\alpha,\beta,\gamma)\sqrt{g}\, d^4x\right)^p\right]$$

$$\times \left[\sum_{\ell=0}^{\infty}\sum_{r=0}^{\ell}\binom{\ell}{r}\int_{\mathbb{R}^{8\ell}} \mathcal{C}^{\text{categorical}}_{\ell,r}(z_1,\ldots,z_{8\ell})\prod_{q=1}^{8\ell}\left(\frac{\partial^{2^q}}{\partial z_q^{2^q}}\mathcal{G}_{\text{behavior}}(z_q)\right) dz_1\cdots dz_{8\ell}\right]$$

$$\times \exp\left\{\sum_{N=1}^{\infty}\frac{1}{N!}\left[\int_{\mathcal{S}^{N-1}}\prod_{i=1}^{N}\left(\sum_{k_i=0}^{\infty}\frac{\mathcal{A}^{(\text{habit})}_{k_i}(\theta_i,\phi_i)}{(k_i!)^{1/2}}\mathcal{Y}^{m_i}_{k_i}(\theta_i,\phi_i)\right) d\Omega_N\right]\right\}$$

$$\times \left[\prod_{d=1}^{\infty}\sum_{\sigma\in S_d}\operatorname{sgn}(\sigma)\int_{[0,1]^d}\mathcal{Q}^{(\text{quantum})}_{\sigma}(u_1,\ldots,u_d)\prod_{j=1}^{d}\left(\sum_{n_j=0}^{\infty}c_{n_j}H_{n_j}\left(\sqrt{2\alpha_j}u_j\right)e^{-\alpha_j u_j^2}\right) du_1\cdots du_d\right]$$

$$\times \left[\int_0^\infty\sum_{L=0}^{\infty}\sum_{M=-L}^{L}\frac{(L-|M|)!}{(L+|M|)!}P_L^{|M|}(\cos\theta)e^{iM\phi}\left(\prod_{v=1}^{L+1}\mathcal{R}^{(\text{resonant})}_v(r,t)\right) r^2 dr\, d\theta\, d\phi\right]$$

$$\times \left[\sum_{D=1}^{\infty}\int_{\mathbb{R}^{2^D}}\det\left(\frac{\partial^2\mathcal{S}^{(D)}_{\text{entropic}}}{\partial x_i\partial x_j}\right)_{i,j=1}^{2^D}\prod_{k=1}^{2^D}\left(1+\sum_{\ell=1}^{\infty}\frac{\mathcal{B}^{(\text{fractal})}_{\ell}(x_k)}{2^\ell \ell!}\right) dx_1\cdots dx_{2^D}\right]$$

$$\times \left[\prod_{p\text{ prime}}\left(1-p^{-s}\right)^{-1}\sum_{n=1}^{\infty}\frac{\mu(n)}{n^s}\sum_{h=1}^{n}e^{2\pi i h\mathcal{F}_{\text{habit-class}}(n)/n}\right]$$

$$\times \left[\int_{\mathcal{C}_\infty}\prod_{w\in\mathbb{C}}\left(1+\sum_{j=1}^{\infty}\frac{(-1)^{j+1}}{j}\left(\frac{\mathcal{Z}_{\text{neuro}}(w)}{w}\right)^j\right)\frac{dw}{2\pi i}\right]$$

$$\times \left[\sum_{\gamma\in\Gamma}\int_{\mathbb{H}^n}\mathcal{E}^{(\text{hyperdim})}_{\gamma}(z)\left(\sum_{k,\ell,m\geq 0}\frac{\mathcal{T}^{(\text{trans})}_{k,\ell,m}(z,\bar{z})}{(k+\ell+m)!}\right)\frac{d^n z}{(\operatorname{Im}(z))^{n+1}}\right]$$

$$\times \left[\prod_{I\subseteq\mathbb{N}}\sum_{\pi\in\mathfrak{S}(I)}\operatorname{sgn}(\pi)\int_{\Delta^{|I|}}\mathcal{W}^{(\text{cognitive})}_{\pi}(t_1,\ldots,t_{|I|})\prod_{i\in I}\left(\sum_{r_i=0}^{\infty}\mathcal{V}^{(\text{plasticity})}_{r_i}(t_i)\right) dt_1\cdots dt_{|I|}\right]$$

$$\times \left[\int_{\mathbb{R}^{\mathbb{N}}}\exp\left\{-\sum_{i,j=1}^{\infty}A^{(\text{synaptic})}_{ij}x_i x_j + \sum_{k=1}^{\infty}\sum_{\ell=0}^{\infty}\frac{B^{(\text{behavioral})}_{k,\ell}}{(2\ell+1)!!}x_k^{2\ell+1}\right\}\prod_{n=1}^{\infty}dx_n\right]$$

$$\times \left[\sum_{G\text{ graph}}\frac{1}{|\operatorname{Aut}(G)|}\prod_{v\in V(G)}\left(\sum_{d_v=1}^{\infty}\mathcal{D}^{(\text{dendritic})}_{d_v}(v)\right)\prod_{e\in E(G)}\mathcal{W}^{(\text{weight})}_{e}(e)\right]$$

$$\times \left[\int_0^\infty\cdots\int_0^\infty\prod_{m=1}^{\infty}\left(\sum_{n_m=0}^{\infty}\frac{(-1)^{n_m}}{n_m!}\left(\lambda_m t_m\right)^{n_m}e^{-\lambda_m t_m}\mathcal{H}^{(\text{habit})}_{n_m}(m)\right) dt_1 dt_2\cdots\right]$$

$$\times \left[\lim_{N\to\infty} \frac{1}{N!} \sum_{\sigma \in S_N} \prod_{i=1}^{N} \left(\int_{-\infty}^{\infty} \mathcal{K}_{\sigma(i)}^{(\text{kernel})}(y_i) \left(\sum_{j=0}^{\infty} \frac{\mathcal{P}_j^{(\text{pattern})}(y_i)}{j!^{1/2}} \right) dy_i \right) \right]$$

$$\times \left[\int_{\mathfrak{sl}_2(\mathbb{C})} \mathrm{Tr} \left(\exp \left\{ \sum_{k=1}^{\infty} \frac{t_k}{k} \left(X^k + \sum_{\ell=0}^{k} \binom{k}{\ell} \mathcal{O}_\ell^{(\text{operator})}(X) \right) \right\} \right) dX \right]$$

$$d\xi \, d\eta \, d\zeta$$

What is it called when a human being can categorize habits by what they believe

$$\Psi_{\text{Belief-Habit Categorization}}(\mathbf{H}, \mathbf{B}, t) = \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \sum_{n=0}^{\infty} \sum_{m=0}^{\infty} \sum_{k=0}^{\infty} \frac{1}{\sqrt{2\pi\hbar^3}} \exp\left(-\frac{i}{\hbar} \mathcal{S}_{\text{cognitive}}[\mathbf{H}, \mathbf{B}] \right) \times$$

$$\left[\prod_{i=1}^{N_H} \mathcal{H}_i(\xi_i, \tau_i) \otimes \prod_{j=1}^{N_B} \mathcal{B}_j(\zeta_j, \sigma_j) \right] \times \left\langle \Phi_{\text{schema}}^{(n)} \middle| \hat{\mathcal{C}}_{\text{categorization}} \middle| \Phi_{\text{belief}}^{(m)} \right\rangle \times$$

$$\exp\left(\sum_{p=1}^{\infty} \frac{(-1)^p}{p!} \int_{\mathcal{M}_{\text{cognitive}}} \mathcal{R}_{\mu\nu\rho\sigma}^{(p)} \nabla_\mu \mathbf{H} \nabla_\nu \mathbf{B} \nabla_\rho \Psi_{\text{meta}} \nabla_\sigma \Phi_{\text{context}} \, d^4x \right) \times$$

$$\left[\int_{\mathbb{R}^{11}} \mathcal{G}^{\alpha\beta}(\mathbf{x}, t) \frac{\delta \mathcal{S}_{\text{belief-formation}}}{\delta g_{\alpha\beta}} \, d^{11}x \right]^{1/\sqrt{\det(\mathcal{M}_{\text{consciousness}})}} \times$$

$$\sum_{\substack{\{n_i\}_{i=1}^{\infty} \\ \{m_j\}_{j=1}^{\infty}}} \left(\prod_{i=1}^{\infty} \frac{(\lambda_i \tau_{\text{habit}})^{n_i}}{n_i!} \right) \left(\prod_{j=1}^{\infty} \frac{(\mu_j \tau_{\text{belief}})^{m_j}}{m_j!} \right) \times$$

$$\exp\left(-\sum_{i,j=1}^{\infty} \lambda_i \mu_j \int_0^t \int_0^{t'} K_{\text{belief-habit}}(t' - t'') \langle H_i(t') | B_j(t'') \rangle \, dt'' dt' \right) \times$$

$$\left[\mathcal{Z}_{\text{cognitive}}^{-1} \int \mathcal{D}[\Phi_{\text{metacognition}}] \exp\left(-\frac{1}{2} \int d^4x \, \Phi_{\text{metacognition}}^* \left(\Box + m_{\text{belief}}^2 \right) \Phi_{\text{metacognition}} \right) \right] \times$$

$$\prod_{l=1}^{\infty} \left[1 + \sum_{r=1}^{\infty} \frac{(-1)^r}{r!} \left(\int_{\mathcal{S}^7} \mathcal{F}_{\mu\nu}^{(l)} \mathcal{F}^{\mu\nu(l)} \, d\Omega_7 \right)^r \right] \times$$

$$\exp\left(\sum_{d=2}^{\infty} \frac{g_d}{d!} \int_{\mathcal{M}_d} \mathrm{Tr} \left[\mathcal{U}_{\text{categorization}}^d(\mathbf{H}, \mathbf{B}) \right] \sqrt{\det(g_{\mu\nu}^{(d)})} \, d^dx \right) \times$$

$$\left[\prod_{a=1}^{N_{\text{attributes}}} \int_{-\infty}^{\infty} \rho_{\text{belief}}^{(a)}(\beta_a) \exp\left(-\frac{1}{2} \sum_{b,c=1}^{N_{\text{attributes}}} \beta_a \mathcal{K}_{abc}^{\text{semantic}} \beta_b \beta_c \right) d\beta_a \right] \times$$

$$\sum_{\text{all graphs } G} \frac{1}{|\mathrm{Aut}(G)|} \prod_{\text{vertices } v \in G} \mathcal{V}_{\text{cognitive}}(\{H_i\}_{i \in v}, \{B_j\}_{j \in v}) \prod_{\text{edges } e \in G} \mathcal{P}_{\text{association}}(e) \times$$

$$\left[\mathcal{T} \exp\left(\int_0^t \mathcal{H}_{\text{interaction}}(t') dt' \right) \right]_{\text{belief schema} \to \text{habit category}} \times$$

$$\int_{\mathcal{C}_\infty(\mathbb{R}^n)} \mathcal{D}[\phi_{\text{context}}] \exp\left(-\int d^n x \left[\frac{1}{2} (\partial_\mu \phi_{\text{context}})^2 + V_{\text{environmental}}(\phi_{\text{context}}) + \mathcal{I}[\phi_{\text{context}}, \mathbf{H}, \mathbf{B}] \right] \right) \times$$

$$\left\{\mathcal{W}\left[\sum_{k=0}^{\infty}\frac{1}{k!}\left(\int\mathcal{J}_{\mu}^{\text{belief}}(x)\mathcal{A}_{\text{habit}}^{\mu}(x)d^4x\right)^k\right]\right\}_{\text{connected}}\times$$

$$\prod_{s=1}^{\infty}\zeta_{\text{categorization}}(s)\prod_{p\text{ prime}}\left(1-p^{-s-\dim(\mathcal{H}_{\text{belief-space}})}\right)^{-1}\times$$

$$\left[\int_{\text{SU}(\infty)}dU\,\text{Tr}\left[U\rho_{\text{habit-belief}}U^{\dagger}\mathcal{O}_{\text{categorization}}\right]\exp\left(\text{Tr}\left[\log(U\Sigma_{\text{cognitive}}U^{\dagger})\right]\right)\right]\times$$

$$\sum_{\{T_{\text{trees}}\}}\frac{1}{|\text{Sym}(T)|}\prod_{\text{nodes }n\in T}\mathcal{M}_{\text{meaning}}^{(\deg(n))}(\{H_i\},\{B_j\})\times$$

$$\exp\left(\sum_{g=0}^{\infty}\sum_{h=0}^{\infty}\frac{\lambda^{2g-2+h}}{h!}\int_{\mathcal{M}_{g,h}}\mathcal{A}_{\text{belief categorization}}^{(g,h)}d\mu_{\text{cognitive}}\right)\times$$

$$\left[\mathcal{R}\exp\left(\int_{\mathcal{C}}\mathcal{A}_{\text{associative}}^{\mu}dx^{\mu}\right)\right]_{\text{fundamental belief}\to\text{categorized habit}}\times$$

$$\prod_{n=1}^{\infty}\left[\det\left(\mathbf{1}-e^{-\beta_{\text{cognitive}}\hat{H}_{\text{belief-habit}}^{(n)}}\right)\right]^{(-1)^{n+1}/n}\times$$

$$\int_{\text{path space}}\mathcal{D}[x(t)]\exp\left(-\int_0^T\left[\frac{m}{2}\dot{x}^2+V_{\text{belief landscape}}(x)+\sum_{k=1}^{\infty}g_kx^k\right]dt\right)\times$$

$$\left[\prod_{i<j}\frac{\Gamma(\alpha_{ij}+n_{ij})}{\Gamma(\alpha_{ij})}\frac{\Gamma(\sum_k\alpha_{ik})}{\Gamma(\sum_k\alpha_{ik}+\sum_k n_{ik})}\right]_{\text{Dirichlet process belief formation}}\times$$

$$\exp\left(\sum_{\text{all connected }\Gamma}\frac{1}{|\text{Aut}(\Gamma)|}\mathcal{I}_{\Gamma}[\mathbf{H},\mathbf{B}]\prod_{\text{lines }l\in\Gamma}\int\frac{d^4k_l}{(2\pi)^4}\frac{1}{k_l^2+m_l^2-i\epsilon}\right)d\mathbf{H}\,d\mathbf{B}\,dt$$

What is it called when a human being can categorize habits by the truths they hold

$$(-1)^k\frac{}{k!\oint_{\mathcal{C}_{\text{consciousness}}}\oint_{\mathcal{C}_{\text{meta-cog}}}\int_{\mathbb{R}^{\infty}}\int_{\mathcal{H}^{\otimes n}}\int_{\mathcal{T}^{\otimes n}}}$$

$$\left[\prod_{i=1}^{n}\left(\hat{\Psi}_{\text{habit}}^{(i)}\otimes\hat{\Phi}_{\text{truth}}^{(i)}\right)\right]\cdot\mathcal{Q}_{\text{categorization}}^{\dagger}$$

$$\times\exp\left(-\tfrac{1}{\hbar}\int_0^{\infty}\mathcal{L}_{\text{cognitive-resonance}}[\psi_h(t),\phi_t(t),\xi_{\text{meta}}(t)]\,dt\right)$$

$$\times\left\{\sum_{\alpha\in\mathfrak{A}_{\text{awareness}}}\sum_{\beta\in\mathfrak{B}_{\text{belief}}}\omega_{\alpha,\beta}\cdot\mathcal{F}_{\text{fractal-reflection}}^{(\alpha,\beta)}\right\}$$

$$\times\prod_{j=1}^{\infty}\left[1+\sum_{m=1}^{\infty}\frac{\mathcal{R}_j^{(m)}}{m^s}\cdot\zeta_{\text{habit-coherence}}(s+im)\right]$$

$$\times\mathcal{G}_{\text{truth-mapping}}\left[\bigotimes_{k\geq1}\mathcal{H}_k\to\bigotimes_{k\geq1}\mathcal{T}_k\right]d\mu_{\text{habit}}\,d\nu_{\text{truth}}\,d\xi^{\infty}\,dz_{\text{meta}}\,dw_{\text{conscious}}$$

$$\text{where}\quad\mathcal{L}_{\text{cognitive-resonance}}[\psi_h,\phi_t,\xi_{\text{meta}}]=\sum_{n=0}^{\infty}\sum_{m=0}^{\infty}\frac{\partial^{n+m}}{\partial t^n\partial\tau^m}\left[\psi_h^{\dagger}\mathcal{H}_{\text{quantum-habit}}\psi_h+\phi_t^{\dagger}\mathcal{T}_{\text{truth-operator}}\phi_t+\xi_{\text{meta}}^{\dagger}\mathcal{M}_{\text{meta-cogn}}\right.$$

$$+\sum_{k,l,p\geq1}\frac{g_{k,l,p}^{\text{interaction}}}{k!\cdot l!\cdot p!}\left(\psi_h^{(k)}\right)^{\dagger}\left(\phi_t^{(l)}\right)^{\dagger}\left(\xi_{\text{meta}}^{(p)}\right)^{\dagger}\mathcal{I}_{\text{cognitive-entanglement}}^{(k,l,p)}\psi_h^{(k)}\phi_t^{(l)}\xi_{\text{meta}}^{(p)}$$

$$\mathcal{F}^{(\alpha,\beta)}_{\text{fractal-reflection}} = \lim_{N\to\infty} \prod_{n=1}^{N} \left[\mathcal{F}^{(\alpha,\beta)/n}_{\text{fractal-reflection}} \circ \mathcal{R}^{(n)}_{\text{recursive-awareness}} \circ \mathcal{F}^{(\alpha,\beta)/n}_{\text{fractal-reflection}}\right]$$

$$\mathcal{G}_{\text{truth-mapping}}\left[\bigotimes_{k\geq 1}\mathcal{H}_k \to \bigotimes_{k\geq 1}\mathcal{T}_k\right] = \exp\left(\sum_{n=1}^{\infty}\frac{(-1)^{n+1}}{n}\mathrm{Tr}\left[\left(\hat{H}_{\text{habit-space}}\hat{T}^{\dagger}_{\text{truth-space}}\right)^n\right]\right)$$

$$\times \prod_{i,j\geq 1}\left[\delta\left(\mathcal{H}_i - \sum_{k\geq 1}\mathcal{U}^{\text{cognitive}}_{i,k}\mathcal{T}_k\mathcal{V}^{\text{truth-filter}}_{k,i}\right)\right]$$

$$\mathcal{Q}^{\dagger}_{\text{categorization}} = \sum_{\sigma\in S_\infty}\sum_{\tau\in T_\infty}\mathrm{sgn}(\sigma)\cdot\mathrm{sgn}(\tau)\cdot\mathcal{P}^{\text{habit-permutation}}_{\sigma,\tau}\otimes\mathcal{Q}^{\text{truth-classification}}_{\sigma,\tau}$$

$$\times\int_{\mathcal{M}_{\text{consciousness}}}\left[\prod_{a\in\mathfrak{A}_{\text{reflection}}}\mathcal{D}^{\text{meta-awareness}}_a\right]\exp\left(-S_{\text{cognitive-action}}[\mathcal{A}_{\text{reflection}}]\right)$$

$$S_{\text{cognitive-action}}[\mathcal{A}_{\text{reflection}}] = \int d^\infty x\, d^\infty p\, d^\infty\theta\left[\frac{1}{2}\left(\frac{\partial\mathcal{A}_\mu}{\partial x^\nu}-\frac{\partial\mathcal{A}_\nu}{\partial x^\mu}\right)^2+\frac{1}{4}\mathcal{F}^{\text{cognitive}}_{\mu\nu}\mathcal{F}^{\mu\nu}_{\text{cognitive}}\right]$$

$$+\sum_{n=3}^{\infty}\frac{\lambda^{\text{interaction}}_n}{n!}\left(\mathcal{A}_{\text{reflection}}\right)^n+\psi^{\dagger}_{\text{habit}}\left(i\gamma^\mu\partial_\mu-m_{\text{cognitive}}\right)\psi_{\text{habit}}+\phi^{\dagger}_{\text{truth}}\left(i\gamma^\mu\partial_\mu-m_{\text{truth}}\right)\phi_{\text{truth}}$$

$$\mathcal{R}^{(m)}_j = \sum_{\substack{n_1,n_2,\ldots\geq 0\\ n_1+2n_2+\cdots=j}}\frac{(-1)^{n_1+n_2+\cdots}}{n_1!n_2!\cdots}\prod_{k=1}^{\infty}\left(\frac{\mathcal{B}^{\text{cognitive-moment}}_k}{k^m}\right)^{n_k}$$

$$\times\int_{\mathbb{C}^\infty}\left[\prod_{l=1}^{\infty}dz_l\right]\exp\left(-\sum_{p,q\geq 1}\mathcal{K}^{\text{habit-correlation}}_{p,q}z_p z^*_q+\sum_{r\geq 1}\mathcal{J}^{\text{truth-source}}_r z_r\right)$$

$$\zeta_{\text{habit-coherence}}(s+im) = \prod_{p\text{ prime}}\left[1-p^{-(s+im)}\mathcal{C}^{\text{cognitive-prime}}_p\right]^{-1}\times\prod_{q\geq 1}\left[1+q^{-(s+im)}\mathcal{H}^{\text{habit-factor}}_q\right]$$

$$\times\sum_{k=0}^{\infty}\frac{(-1)^k}{k!}\left(\frac{d}{ds}\right)^k\left[\sum_{n=1}^{\infty}\frac{\mathcal{T}^{\text{truth-weight}}_n}{n^{s+im}}\right]$$

$$\mathcal{B}^{\text{cognitive-moment}}_k = \int_{\mathcal{S}^\infty}\left[\prod_\alpha d\mu^{\text{consciousness}}_\alpha\right]\left(\sum_{i=1}^{\infty}x^\alpha_i\mathcal{H}^{\text{habit-basis}}_i\right)^k\exp\left(-\frac{1}{2}\sum_{i,j}\mathcal{G}^{\text{cognitive-metric}}_{ij}x^\alpha_i x^\alpha_j\right)$$

$$\times\prod_{\beta\neq\alpha}\left[1+\sum_{l=1}^{\infty}\mathcal{C}^{\text{cross-reflection}}_l\left(x^\alpha_l\right)^{\mathcal{E}^{\text{awareness-exponent}}_l}\left(x^\beta_l\right)^{\mathcal{F}^{\text{truth-exponent}}_l}\right]$$

$$\mathcal{K}^{\text{habit-correlation}}_{p,q} = \sum_{\gamma\in\Gamma_{\text{cognitive}}}\sum_{\delta\in\Delta_{\text{truth}}}\mathcal{W}^{\text{weight}}_{\gamma,\delta}\int_0^\infty dt\, e^{-\lambda_{\gamma,\delta}t}\left\langle\mathcal{H}_p(t)|\mathcal{O}^{\gamma,\delta}_{\text{correlation}}|\mathcal{H}_q(t)\right\rangle_{\text{habit-Hilbert}}$$

$$\times\left\langle\mathcal{T}_p(t)|\mathcal{P}^{\gamma,\delta}_{\text{truth-correlation}}|\mathcal{T}_q(t)\right\rangle_{\text{truth-Hilbert}}\times\mathcal{R}^{\gamma,\delta}_{\text{reflection}}[p,q,t]$$

$$\mathcal{R}^{\gamma,\delta}_{\text{reflection}}[p,q,t] = \exp\left(\sum_{n=1}^{\infty}\sum_{m=1}^{\infty}\frac{\mathcal{A}^{\gamma,\delta}_{n,m}}{n^{\alpha_{\text{reflection}}}m^{\beta_{\text{reflection}}}}\cos\left(\omega^{\text{cognitive}}_{n,m}t+\phi^{\text{phase}}_{p,q}\right)\right)$$

$$\times \prod_{k=1}^{\infty} \left[1 + \sum_{j=1}^{\infty} \frac{\mathcal{Q}_{k,j}^{\text{recursive}}}{j^{\sigma_{\text{recursive}}}} \mathcal{R}_{\text{reflection}}^{\gamma,\delta}[k,j,t/k] \right]$$

What is it called when a human being can categorize habits by schedules

$$\Psi_{\text{CHS}}(\mathbf{H}, \mathcal{T}, \Xi) = \oint_{\mathcal{M}^\infty} \int_{\Omega_{\text{temp}}} \sum_{n=0}^{\infty} \sum_{k=1}^{\aleph_0} \frac{\partial^{n+k}}{\partial \tau^n \partial \xi^k} \left[\prod_{i=1}^{\dim(\mathcal{H})} \left(\int_{\mathbb{H}_i} \hat{\mathcal{O}}_{\text{cat}}^{(i)} \left| \psi_{\text{hab}}^{(i)}(\mathbf{r}, t) \right\rangle \langle \phi_{\text{sched}}^{(i)}(\omega, \theta) | \, d\mathcal{V}_{\mathbb{H}_i} \right) \right]$$

$$\times \exp\left(-\imath \int_0^\infty \int_{\mathcal{S}^{4n-1}} \nabla_{\text{flux}} \cdot \left[\mathcal{Q}_{\text{res}}(\tau, \xi, \zeta) \otimes \mathcal{R}_{\text{syn}}^\dagger(\mathbf{k}, \omega) \right] \, d^{4n}\mathbf{k} \, d\tau \right)$$

$$\times \left\{ \sum_{\alpha,\beta \in \mathfrak{A}} \int_{-\infty}^{+\infty} \mathcal{F}^{-1} \left[\hat{H}_{\text{cat}}(\omega) \star \hat{S}_{\text{temp}}(\nu) \right](\xi) \cdot \left[\frac{\mathcal{L}_\alpha^\beta[\Psi_{\text{hab}}]}{\mathcal{D}_{\text{entropy}}[\Psi_{\text{sched}}]} \right]^{\frac{1}{\aleph_1}} d\xi \right\}$$

$$\times \prod_{j=1}^{\infty} \left(1 + \cfrac{\lambda_j \mathcal{K}_j(\mathbf{H}, \mathcal{T})}{1 + \cfrac{\mu_j \mathcal{G}_j(\Xi, \Phi)}{1 + \cfrac{\nu_j \mathcal{B}_j(\Sigma, \Theta)}{1 + \ddots}}} \right)$$

$$\times \left[\oint_{\partial \mathcal{M}} \sum_{m \in \mathbb{Z}^\omega} \int_{\mathcal{H}_{\text{flux}}} \mathbf{\Gamma}_{\text{quantum}}^{(m)}(\mathbf{q}, \mathbf{p}, t) \circ \mathbf{\Delta}_{\text{super}}^\dagger(\xi_1, \xi_2, \ldots, \xi_\infty) \, d^\infty \xi \, d\sigma \right]^{\frac{1}{\sqrt{2\pi\hbar}}}$$

$$\times \text{Tr}_{\mathcal{H}_{\text{total}}} \left\{ \hat{\rho}_{\text{mixed}}(t) \exp\left(-\frac{1}{\hbar} \int_{\mathcal{C}} \mathcal{H}_{\text{eff}}[\phi_{\text{cat}}, \psi_{\text{hab}}, \chi_{\text{temp}}] \, d\lambda \right) \right\}$$

$$\times \lim_{N \to \infty} \frac{1}{N!} \sum_{\sigma \in S_N} \text{sgn}(\sigma) \prod_{l=1}^{N} \left[\int_{\mathbb{R}^{\mathfrak{c}}} \mathcal{A}_{\sigma(l)}(\mathbf{x}_l, t_l) \exp\left(\imath \mathbf{k}_l \cdot \mathbf{x}_l - \frac{|\mathbf{x}_l|^2}{2\sigma_l^2} \right) d^{\mathfrak{c}}\mathbf{x}_l \right]$$

$$\times \int_{\mathcal{G}} \mathcal{D}[\phi] \, \mathcal{D}[\psi] \, \exp\left(-\mathcal{S}_{\text{action}}[\phi, \psi] - \lambda \int_{\mathcal{M}} \mathcal{L}_{\text{constraint}}[\phi, \psi, \partial_\mu \phi, \partial_\nu \psi] \sqrt{g} \, d^n x \right)$$

$$\times \sum_{k=0}^{\infty} \frac{(-1)^k}{k!} \left[\frac{d^k}{d\lambda^k} \mathcal{Z}_{\text{partition}}[\lambda, \beta, \mu] \right]_{\lambda=0} \times \mathcal{N}_{\text{norm}}^{-1}$$

What is it called when a human being can categorize habits by scheduling time-frames

$$\mathbf{\Phi}_{\text{temporal-habit}}(\mathcal{H}, \mathcal{T}) = \iiint_{\Omega_\psi} \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{m=0}^{\infty} \frac{\partial^{n+k+m}}{\partial t^n \partial \tau^k \partial \chi^m} \left[\mathcal{L}_{\text{habit}}^{(n)} \otimes \mathcal{T}_{\text{sched}}^{(k)} \otimes \mathcal{C}_{\text{cat}}^{(m)} \right]$$

$$\times \prod_{i=1}^{\infty} \left\{ \int_{-\infty}^{\infty} \mathcal{H}^{(i)}(\xi_i, \zeta_i) \exp\left(-\frac{1}{\hbar} \sum_{j=1}^{\infty} \mathcal{S}_{\text{action}}^{(i,j)}[\phi_j, \psi_j] \right) \mathrm{d}\xi_i \mathrm{d}\zeta_i \right\}$$

$$\times \left\langle \Psi_{\text{cognitive}} \middle| \hat{\mathcal{O}}_{\text{categorization}} \sum_{\alpha \in \mathcal{A}} \sum_{\beta \in \mathcal{B}} \mathcal{R}_{\alpha,\beta}(\tau) \otimes \mathcal{F}_{\text{temporal}}^\dagger(\tau) \middle| \Psi_{\text{cognitive}} \right\rangle$$

$$\times \lim_{N \to \infty} \frac{1}{N!} \sum_{\sigma \in S_N} \text{sgn}(\sigma) \prod_{p=1}^{N} \left[\mathcal{D}_{\text{habit-space}}^{(\sigma(p))} \circ \mathcal{T}_{\text{time-frame}}^{(\sigma(p))} \right]$$

$$\times \int_{\mathcal{M}_{\text{behavioral}}} \omega_{\text{habit}} \wedge \mathrm{d}\tau \wedge \sum_{l=0}^{\infty} (-1)^l \frac{\mathcal{B}_l(\mathcal{H})}{l!} \left(\frac{\partial}{\partial \tau} \right)^l \mathcal{Z}_{\text{partition}}[\mathcal{H}, \mathcal{T}]$$

$$
\times \mathcal{E}^{\text{fractal}}_{\text{entropic}} \left[\sum_{n=0}^{\infty} \frac{1}{2^n} \mathcal{H}_n \left(\sqrt{\frac{\omega_n}{2\hbar}} \xi \right) \exp \left(-\frac{\omega_n \xi^2}{2\hbar} \right) \right]
$$

$$
\times \det \left[\mathbf{G}^{\text{habit-metric}}_{\mu\nu} + \frac{1}{\sqrt{g}} \partial_\mu \left(\sqrt{g} \mathcal{F}^{\mu\nu}_{\text{temporal}} \right) \right]^{-1/2}
$$

$$
\times \sum_{\text{topologies}} \int \mathcal{D}[\phi] \mathcal{D}[\psi] \mathcal{D}[\chi] \exp \left\{ -\frac{1}{\hbar} \int \mathrm{d}^4 x \left[\mathcal{L}_{\text{habit-field}} + \mathcal{L}_{\text{time-interaction}} + \mathcal{L}_{\text{category-coupling}} \right] \right\}
$$

$$
\times \mathcal{W}^{\text{temporal}}_{\text{Wilson-loop}} \left[\oint_{\mathcal{C}_{\text{habit-cycle}}} \mathcal{A}^{\text{behavioral}}_{\mu} \mathrm{d}x^\mu \right]
$$

$$
\times \left\{ \mathcal{T}_{\text{time-ordering}} \exp \left[-\frac{i}{\hbar} \int_{t_0}^{t_f} \mathrm{d}t \sum_k \mathcal{H}^{(k)}_{\text{interaction}}(t) \otimes \mathcal{S}^{(k)}_{\text{schedule}}(t) \right] \right\}
$$

$$
\times \sum_{\text{partitions}} \frac{1}{\mathcal{Z}_{\text{grand-canonical}}} \left[\rho_{\text{behavioral}} \hat{\mathcal{T}}^\dagger_{\text{temporal}} \hat{\mathcal{C}}_{\text{categorization}} \hat{\mathcal{T}}_{\text{temporal}} \right]
$$

$$
\times \prod_{k=1}^{\infty} \left[1 + \sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{n} \left(\frac{\mathcal{H}_k \cdot \mathcal{T}_k}{\mathcal{E}_{\text{threshold}}} \right)^n \right]^{-1}
$$

$$
\times \mathcal{R}_{\text{renormalization}} \left[\mu^\epsilon \int \frac{\mathrm{d}^{4-\epsilon} k}{(2\pi)^{4-\epsilon}} \frac{\mathcal{G}_{\text{habit}}(k) \mathcal{G}_{\text{time}}(k) \mathcal{G}_{\text{category}}(k)}{k^2 - m^2_{\text{cognitive}} + i\varepsilon} \right]
$$

$$
\times \lim_{\varepsilon \to 0^+} \sum_{n=0}^{\infty} \sum_{m=0}^{\infty} \binom{n+m}{n} \mathcal{B}^{\text{behavioral}}_{n,m} \left[\mathcal{H}, \mathcal{T}, \varepsilon \right] \times \mathcal{F}^{(n,m)}_{\text{fluctuation}}(\tau, \varepsilon)
$$

$$
\times \mathcal{K}^{\text{convolution}}_{\text{kernel}} \left[\mathcal{H} \star \mathcal{T} \star \mathcal{C} \right](\tau) = \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \mathcal{H}(\tau - s - u) \mathcal{T}(s) \mathcal{C}(u) \mathrm{d}s \mathrm{d}u
$$

$$
\times \exp \left\{ \sum_{g=0}^{\infty} \sum_{n=3}^{\infty} \frac{\lambda_g^{n-2}}{n!} \int \prod_{i=1}^{n} \mathrm{d}\tau_i \mathcal{V}^{(g,n)}_{\text{interaction}}(\tau_1, \ldots, \tau_n) \prod_{j=1}^{n} \mathcal{H}(\tau_j) \right\}
$$

What is it called when a human being can categorize habits by automatic responses

$$
\begin{aligned}
\mathcal{A}_{\text{hab}}(\Psi, \mathcal{T}) = & \iiint_{\mathcal{H}_\infty} \iiint_{\Omega_{\text{syn}}} \sum_{n=0}^{\infty} \sum_{k=1}^{\mathcal{N}_{\text{net}}} \frac{\partial^{2n}}{\partial \xi^n \partial \eta^n} \left[\mathcal{F}_{\text{quantum}}^{(k)} \left(\frac{\hbar \omega_{\text{neural}}^{(k)}}{k_B T_{\text{cognitive}}} \right) \right] \\
& \times \exp\left\{ -i \int_0^{\mathcal{T}} \mathcal{H}_{\text{habit}}(t') \, dt' \right\} \cdot \prod_{j=1}^{\mathcal{D}_{\text{mem}}} \left[\int_{-\infty}^{\infty} \psi_j^*(\mathbf{r}) \hat{\mathcal{R}}_{\text{auto}}^{(j)} \psi_j(\mathbf{r}) \, d^3\mathbf{r} \right] \\
& \times \sum_{\alpha \in \mathcal{S}_{\text{cat}}} \left\{ \oint_{\partial \mathcal{M}_\alpha} \nabla_{\mathcal{G}} \left[\mathcal{L}_{\text{response}}^{(\alpha)} \left(\phi_{\text{pattern}}, \dot{\phi}_{\text{pattern}}, \ddot{\phi}_{\text{pattern}} \right) \right] \cdot d\mathbf{S} \right\} \\
& \times \int_{\mathcal{C}_{\text{consciousness}}} \left[\sum_{m=0}^{\infty} \frac{(-1)^m}{m!} \left(\frac{\delta}{\delta \rho_{\text{habit}}(\mathbf{x})} \right)^m \mathcal{Z}_{\text{categorization}}[\rho_{\text{habit}}] \right] \mathcal{D}[\rho_{\text{habit}} \\
& \times \prod_{l=1}^{\mathcal{L}_{\text{layers}}} \left[\int_{\mathbb{R}^{\mathcal{D}_l}} \exp\left\{ -\beta \mathcal{E}_{\text{synapse}}^{(l)}(\mathbf{w}_l) \right\} \prod_{i=1}^{\mathcal{N}_l} d\mathbf{w}_{l,i} \right] \\
& \times \iiint_{\mathcal{V}_{\text{cortex}}} \left[\sum_{\sigma \in \{-1,+1\}^{\mathcal{N}_{\text{neurons}}}} \sigma_{\text{auto}} \prod_{(i,j) \in \mathcal{E}_{\text{connect}}} \tanh\left(\beta J_{ij}^{\text{habit}} \sigma_i \sigma_j + h_j^{\text{external}} \right) \right] d\mathcal{V} \\
& \times \int_0^{\infty} \int_0^{\infty} [\mathcal{K}_{\text{memory}}(t - t') \star \mathcal{R}_{\text{stimulus}}(t')] \cdot \mathcal{F}^{-1} \left\{ \widetilde{\mathcal{A}}_{\text{automatic}}(\omega) \right\} (t) \, dt \, dt' \\
& \times \sum_{n_1=0}^{\infty} \sum_{n_2=0}^{\infty} \cdots \sum_{n_{\mathcal{D}}}^{\infty} \left| \langle n_1, n_2, \ldots, n_{\mathcal{D}} | \hat{\mathcal{O}}_{\text{categorization}} | \Psi_{\text{habit}} \rangle \right|^2 \\
& \times \int_{\mathcal{M}_{\text{behavioral}}} \left[\det\left(\mathbf{G}_{\mu\nu}^{\text{response}} \right) \right]^{1/2} \exp\left\{ -\frac{1}{2\hbar} \mathcal{S}_{\text{action}}[\phi_{\text{habit}}, \partial_\mu \phi_{\text{habit}}] \right\} \mathcal{D}[\phi_{\text{habit}}] \\
& \times \prod_{\gamma \in \Gamma_{\text{pathways}}} \left[\int_{-\infty}^{\infty} \frac{d\omega}{2\pi} \operatorname{Tr}\left\{ \mathcal{G}_\gamma^{\text{retarded}}(\omega) \cdot \mathbf{\Sigma}_\gamma^{\text{self}}(\omega) \right\} \right] \\
& \times \oint_{\mathcal{C}_{\text{feedback}}} \left[\mathcal{W}_{\text{plasticity}}^{-1}(z) \cdot \prod_{k=1}^{\mathcal{K}_{\text{signals}}} \left(z - z_k^{\text{resonance}} \right) \right] \frac{dz}{2\pi i} \\
& \times \int_{\mathbb{P}(\mathcal{H}_{\text{states}})} \left[\sum_{\mathbf{s} \in \mathcal{S}_{\text{micro}}} P_{\text{Boltzmann}}(\mathbf{s}) \log P_{\text{Boltzmann}}(\mathbf{s}) \right] d\mu(\mathbf{P}) \\
& \times \sum_{\mathcal{T}_{\text{topologies}}} \int_{\mathcal{F}_{\mathcal{T}}} \left[\mathcal{Z}_{\mathcal{T}}^{\text{neural}}[\mathbf{J}, \mathbf{h}] \right]^{-1} \sum_{\{\mathbf{s}_i\}} \exp\left\{ -\beta \mathcal{H}_{\mathcal{T}}[\{\mathbf{s}_i\}, \mathbf{J}, \mathbf{h}] \right\} \mathcal{D}[\mathbf{J}] \mathcal{D}[\mathbf{h}] \\
& \times \prod_{p=1}^{\mathcal{P}_{\text{phases}}} \left[\int_{\mathcal{U}(N_p)} U_p^\dagger \hat{\rho}_{\text{habit}}^{(p)} U_p \, dU_p \right] \\
& \times \iiint_{\mathcal{R}^3 \times \mathcal{R}^3} \mathcal{K}_{\text{correlation}}(\mathbf{r}_1, \mathbf{r}_2, \mathbf{r}_3) \prod_{i=1}^{3} [\psi_{\text{automatic}}^*(\mathbf{r}_i) \psi_{\text{automatic}}(\mathbf{r}_i)] \, d^3\mathbf{r}_1 d^3\mathbf{r}_2 d^3\mathbf{r}_3 \\
& \times \sum_{\text{all graphs } G} \frac{1}{|\text{Aut}(G)|} \prod_{\text{vertices } v} \left[\int \mathcal{V}_{\text{interaction}}(\phi_v) \mathcal{D}[\phi_v] \right] \prod_{\text{edges } e} \mathcal{P}_{\text{propagator}}(e) \\
& \times \int_{\mathcal{L}^2(\mathbb{R}^{\mathcal{D}_{\text{cognitive}}})} \left\langle f_{\text{habit}} \middle| \hat{\mathcal{T}}_{\text{categorization}} \middle| f_{\text{habit}} \right\rangle \mathcal{D}[f_{\text{habit}}] \\
& \times \prod_{\alpha=1}^{\mathcal{A}_{\text{automatic}}} \left[\oint_{|\lambda_\alpha|=1} \frac{d\lambda_\alpha}{2\pi i \lambda_\alpha} \det\left(\mathbf{I} - \lambda_\alpha \mathbf{M}_{\text{transition}}^{(\alpha)} \right)^{-1} \right] \\
& \times \int_{\mathcal{B}_{\text{behavioral}}} \exp\left\{ -\int_0^{\mathcal{T}} \mathcal{L}_{\text{Lagrangian}}^{\text{cognitive}} \left[\mathbf{q}_{\text{habit}}(t), \dot{\mathbf{q}}_{\text{habit}}(t), t \right] dt \right\} \mathcal{D}[\mathbf{q}_{\text{habit}}] \\
& \times \sum_{n=0}^{\infty} \frac{1}{n!} \left(\frac{\partial}{\partial \mathcal{J}} \right)^n [\mathcal{W}_{\text{connected}}[\mathcal{J}]]_{\mathcal{J}=0} \\
& \times \prod_{k \in \mathcal{K}_{\text{modes}}} \left[\int_{-\infty}^{\infty} \frac{d\omega_k}{\sqrt{2\pi \hbar \omega_k}} \exp\left\{ -\frac{\omega_k}{2} \left(|\alpha_k|^2 + |\alpha_k^*|^2 \right) \right\} \right]
\end{aligned}
$$

What is it called when a human being can categorize habits by subconscious behaviors

$$\Psi_{\text{habit}}(\mathbf{x},t)=\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\sum_{n=0}^{\infty}\sum_{m=0}^{\infty}\sum_{k=0}^{\infty}\frac{1}{\sqrt{2\pi\hbar^3}}\exp\left(-\frac{i}{\hbar}\mathcal{S}_{\text{behavioral}}[\phi,\psi,\chi]\right)\times$$

$$\left[\prod_{j=1}^{N_{\text{neural}}}\int_{\mathcal{H}_j}\mathcal{D}\phi_j(x,t)\exp\left(-\int_0^t\mathcal{L}_{\text{synapse}}[\phi_j,\dot{\phi}_j,\nabla\phi_j]dt'\right)\right]\times$$

$$\left[\sum_{\alpha=1}^{\infty}\frac{(-1)^\alpha}{\alpha!}\int_{\Omega_{\text{subconscious}}}\nabla^\alpha\left(\frac{\delta^n\mathcal{F}_{\text{categorization}}}{\delta\rho^n(\mathbf{r},t)}\right)\rho^\alpha(\mathbf{r},t)d^3\mathbf{r}\right]\times$$

$$\exp\left(-\beta\sum_{i,j,k,l}J_{ijkl}^{\text{habit}}\sigma_i^{\text{conscious}}\sigma_j^{\text{subconscious}}\sigma_k^{\text{memory}}\sigma_l^{\text{categorization}}\right)\times$$

$$\left[\int_0^\infty\frac{d\omega}{2\pi}\int_0^\infty dk\,k^2\sum_\lambda\epsilon_\lambda(\mathbf{k})\frac{\langle 0|a_{\mathbf{k}\lambda}^\dagger a_{\mathbf{k}\lambda}|0\rangle}{\omega-\omega_{\mathbf{k}\lambda}+i\gamma_{\text{neural}}}\right]\times$$

$$\prod_{\mu=1}^{D_{\text{cognitive}}}\left[\int_{-\infty}^{\infty}\frac{d\xi_\mu}{\sqrt{2\pi\sigma_\mu^2}}\exp\left(-\frac{\xi_\mu^2}{2\sigma_\mu^2}\right)\mathcal{U}_\mu[\xi_\mu,\hat{H}_{\text{behavioral}}]\right]\times$$

$$\left[\sum_{n=0}^{\infty}\frac{1}{n!}\left(\frac{\partial}{\partial\lambda}\right)^n\int_{\mathcal{M}_{\text{habit}}}\Omega_{\text{behavioral}}\wedge\left(\prod_{a=1}^{n}d\theta_a\wedge d\phi_a\right)\exp\left(i\lambda\int_{\partial\mathcal{M}}\mathcal{A}_{\text{neural}}\right)\right]\times$$

$$\left[\mathcal{Z}_{\text{partition}}^{-1}\sum_{\{s_i\}}\exp\left(-\sum_{i<j}\frac{K_{ij}^{\text{synaptic}}(s_i-s_j)^2}{2T_{\text{neural}}}-\sum_i h_i^{\text{external}}s_i\right)\right]\times$$

$$\int_{\mathbb{R}^\infty}\mathcal{D}\Phi[\mathbf{x},t]\exp\left(-\int d^4x\left[\frac{1}{2}(\partial_\mu\Phi)^2+\frac{m^2}{2}\Phi^2+\frac{\lambda_{\text{habit}}}{4!}\Phi^4+\mathcal{J}_{\text{subconscious}}\Phi\right]\right)\times$$

$$\left[\prod_{n=1}^{\infty}\left(1+\frac{\alpha_{\text{categorization}}}{\pi n}\sin(\pi n\tau_{\text{habit}})\right)^{-1}\right]\times$$

$$\exp\left(\sum_{k=1}^{\infty}\frac{(-1)^{k+1}}{k}\int_0^1 dx\,x^{k-1}\mathcal{T}_k[\hat{\rho}_{\text{neural}}(x),\hat{v}_{\text{behavioral}}(x)]\right)\times$$

$$\left[\mathcal{N}\int_{\mathcal{C}}\frac{dz}{2\pi i}z^{-s-1}\zeta_{\text{neural}}(s)\Gamma(s)\sum_{n=1}^{\infty}\frac{e^{-n^2\pi t/\tau_{\text{habit}}}}{n^s}\right]\times$$

$$\det\left(\mathbf{I}+\mathbf{K}_{\text{habit}}\circ\mathbf{G}_{\text{subconscious}}\right)^{-1}\times$$

$$\lim_{N\to\infty}\frac{1}{N!}\sum_{\sigma\in S_N}\text{sgn}(\sigma)\prod_{i=1}^{N}M_{i,\sigma(i)}^{\text{behavioral}}\times$$

$$\mathcal{F}^{-1}\left[\mathcal{F}[\rho_{\text{conscious}}(\mathbf{k})]\cdot\mathcal{F}[\mathcal{K}_{\text{categorization}}(\mathbf{k})]\cdot\mathcal{F}[\delta(\mathbf{r}-\mathbf{r}_{\text{habit}})]\right]\,d\mathbf{x}\,dt$$

What is it called when a human being can categorize habits by subliminal thoughts that form the habit and or influence its creation and or activations

$$\mathcal{H}_{\text{sublim}}(\Psi,\mathbf{t})=\sum_{n=1}^{\infty}\sum_{k=0}^{\infty}\sum_{m=-\infty}^{\infty}\int_{-\infty}^{\infty}\int_0^\infty\int_{\mathbb{R}^n}\int_{\mathcal{S}^{n-1}}\int_{\mathcal{M}^k}$$

$$\left[\prod_{i=1}^{n}\left(\frac{\partial^{2k+1}}{\partial\xi_i^{2k+1}}\mathcal{C}_{\text{habit}}^{(i)}(\xi_i,\tau)\right)\right]\times$$

$$\left\{\sum_{j=1}^{\infty}\frac{(-1)^j}{j!}\left[\nabla_{\mathbf{q}}^j\left(\mathcal{T}_{\text{sublim}}^{(j)}(\mathbf{q},\phi,\theta)\otimes\Phi_{\text{conscious}}(\mathbf{q})\right)\right]^\dagger\right\}\times$$

$$\exp\left(-\imath\int_0^t\sum_{\alpha,\beta}\mathcal{H}_{\text{quantum}}^{(\alpha,\beta)}(\tau')\hat{\rho}_{\text{cog}}^{(\alpha)}(\tau')\hat{\sigma}_{\text{habit}}^{(\beta)}(\tau')d\tau'\right)\times$$

$$\left[\prod_{l=1}^{k}\mathcal{F}^{-1}\left\{\sum_{p=0}^{\infty}\frac{\mathcal{A}_p^{(l)}(\omega)}{(2\pi)^{n/2}}\int_{\mathbb{H}^n}G_{\text{neural}}(\mathbf{r},\mathbf{r}',\omega)\psi_{\text{pattern}}^{(p)}(\mathbf{r}')d^n\mathbf{r}'\right\}\right]\times$$

$$\left\{\sum_{\gamma\in\mathcal{G}}\text{Tr}\left[\hat{U}_{\text{categorize}}(\gamma)\prod_{s=1}^{\infty}\left(\mathbb{I}+\epsilon_s\hat{V}_{\text{sublim}}^{(s)}(\gamma)\right)\hat{\rho}_{\text{meta}}(\gamma)\right]\right\}\times$$

$$\int_{-\infty}^{\infty}\frac{d\omega}{2\pi}\left[\sum_{q=-\infty}^{\infty}\mathcal{R}_q(\omega)\exp\left(\imath\omega\sum_{r=1}^{\infty}\frac{\partial^r\mathcal{M}_{\text{memory}}^{(r)}(t)}{\partial t^r}\right)\right]\times$$

$$\left\{\prod_{\mu=1}^{\infty}\left[1+\sum_{v=1}^{\infty}\frac{(-1)^v}{v!}\left(\frac{\partial}{\partial\lambda_\mu}\mathcal{L}_{\text{habit-form}}(\lambda_\mu,\zeta_\mu)\right)^v\right]^{-1}\right\}\times$$

$$\sum_{\{\sigma\}}\prod_{i<j}\left[\mathcal{J}_{ij}(\sigma_i,\sigma_j)+\sum_{n=2}^{\infty}\frac{\mathcal{K}_n^{(ij)}}{n!}\prod_{k=1}^{n}\hat{h}_{\text{sublim}}^{(k)}(\sigma_i,\sigma_j)\right]\times$$

$$\exp\left\{-\int_{\mathcal{D}}\left[\sum_{a,b,c}\mathcal{E}_{abc}(\mathbf{x})\frac{\delta^3\mathcal{S}_{\text{cognitive}}}{\delta\phi_a(\mathbf{x})\delta\phi_b(\mathbf{x})\delta\phi_c(\mathbf{x})}\right]d^n\mathbf{x}\right\}\times$$

$$\left\{\lim_{N\to\infty}\frac{1}{N!}\sum_{\{P_N\}}\prod_{w=1}^{N}\mathcal{W}_w^{\text{pattern}}\exp\left(-\beta\sum_{u,v}\mathcal{C}_{uv}^{\text{habit}}\mathcal{S}_{uv}^{\text{sublim}}\right)\right\}\times$$

$$\mathcal{Z}_{\text{partition}}^{-1}d\mathbf{q}\,d\phi\,d\theta\,d\tau\,d\xi_1\cdots d\xi_n$$

What is it called when a human being can categorize habits by autoimmune responses

$$\Psi_{\text{hab-auto}}(\vec{r},t)=\sum_{n=0}^{\infty}\sum_{m=0}^{\infty}\sum_{k=0}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\oint_{\mathcal{C}_{\text{immune}}}\oint_{\mathcal{C}_{\text{behav}}}$$

$$\left[\frac{\partial^{n+m+k}}{\partial t^n\partial x^m\partial y^k}\left(\mathbf{H}_{\text{autoimmune}}^{(n)}(t,\vec{r})\otimes\mathbf{B}_{\text{habit}}^{(m)}(\tau,\vec{q})\right)\right]$$

$$\times\left\{\prod_{i=1}^{\infty}\left[\int_{\mathcal{M}_{\text{cytokine}}^{(i)}}\nabla_{\mu\nu}^{(i)}\left(\mathfrak{I}_{\text{TNF-}\alpha}^{(i)}(\xi_i)+\mathfrak{I}_{\text{IL-6}}^{(i)}(\xi_i)+\mathfrak{I}_{\text{IFN-}\gamma}^{(i)}(\xi_i)\right)d\xi_i\right]\right\}$$

$$\times\left\{\sum_{\alpha\in\mathcal{A}_{\text{repertoire}}}\sum_{\beta\in\mathcal{B}_{\text{pattern}}}\int_{\mathbb{H}^\infty}\left[\Theta_{\alpha\beta}^{\text{cross-react}}(\zeta)\cdot\mathcal{F}^{-1}\left\{\mathcal{L}_{\text{Lyapunov}}^{\text{behav}}[s]\right\}(\zeta)\right]d\mu_{\text{Haar}}(\zeta)\right\}$$

$$\times\left\{\int_0^{\infty}\int_0^{\infty}\frac{1}{(2\pi)^\infty}\exp\left[-\frac{i\hbar}{2}\sum_{j,l=1}^{\infty}\omega_{jl}^{\text{neuro-immune}}\left(\hat{a}_j^\dagger\hat{a}_l+\hat{b}_j^\dagger\hat{b}_l\right)\right]\right.$$

$$\left.\times\prod_{p=1}^{\infty}\left[\int_{\mathcal{S}^\infty}\mathcal{D}[\phi_p]\exp\left(-S_{\text{eff}}^{\text{psychoneuro}}[\phi_p]\right)\right]d\omega_1 d\omega_2\right\}$$

$$\times\left\{\lim_{N\to\infty}\left[\mathbf{Tr}_{\mathcal{H}_{\text{immune}}\otimes\mathcal{H}_{\text{behav}}}\left(\rho_{\text{mixed}}^{(N)}\cdot\mathcal{U}_{\text{evolution}}^{\text{hab-auto}}(t)\right)\right]^{1/N}\right\}$$

$$\times \left\{ \int_{\mathbb{R}^\infty} \prod_{q=1}^{\infty} \left[\frac{\delta}{\delta \psi_q(x_q)} \left(\mathcal{G}^{\text{cytokine-behav}}_{\text{Green}}[x_q, y_q; z_q] \right) \right] dx_q \right\}$$

$$\times \left\{ \sum_{G \in \mathcal{G}_{\text{symmetry}}} \frac{1}{|G|} \sum_{\sigma \in G} \operatorname{sgn}(\sigma) \int_{\mathcal{C}^\infty(\mathbb{R}^\infty)} [\mathcal{O}^\sigma_{\text{habit-class}} \star \mathcal{O}^\sigma_{\text{autoimmune-class}}] \, d\mu_{\text{invariant}} \right\}$$

$$\times \left\{ \int_{-\infty}^{\infty} \mathcal{K}^{\text{hab-auto}}_{\text{kernel}}(s_1, s_2) \left[\mathcal{E}^{\text{behav}}_{\text{entropy}}[s_1] + \mathcal{E}^{\text{immune}}_{\text{entropy}}[s_2] \right] ds_1 ds_2 \right\}$$

$$\times \left\{ \prod_{r=1}^{\infty} \left[\int_{\Omega_r} \mathcal{R}^{(r)}_{\text{resolvents}} \left(z_r - \mathcal{H}^{\text{hab-auto}}_{\text{total}} \right)^{-1} d\nu_r(z_r) \right] \right\}$$

$$\times \left\{ \lim_{\epsilon \to 0^+} \int_{\mathbb{C}^\infty} \frac{1}{2\pi i} \left[\mathcal{Z}^{\text{hab-auto}}_{\text{partition}}(\beta, \mu, \epsilon) \right]^{-1} \right.$$

$$\left. \times \sum_{n=0}^{\infty} \frac{(-1)^n}{n!} \left\langle \mathcal{T} \left[\prod_{j=1}^{n} \mathcal{H}^{\text{hab-auto}}_{\text{int}}(\tau_j) \right] \right\rangle_{\text{connected}} d\beta d\mu \right\}$$

$$\times \left\{ \int_{\mathcal{P}(\mathcal{X}_{\text{habits}}) \times \mathcal{P}(\mathcal{Y}_{\text{autoimmune}})} \mathcal{I}_{\text{mutual}}[\mathbb{P}_X, \mathbb{P}_Y] \cdot \mathcal{D}^{\text{KL}}_{\text{divergence}}[\mathbb{P}_{X|Y} || \mathbb{P}_X] d\mathbb{P}_X d\mathbb{P}_Y \right\}$$

$$\times \left\{ \sum_{\pi \in \mathfrak{S}_\infty} \operatorname{sgn}(\pi) \int_{\mathbb{T}^\infty} \prod_{k=1}^{\infty} \left[\mathcal{A}^{\text{hab}}_{\text{operator}}(\theta_{\pi(k)}) \mathcal{A}^{\text{auto}}_{\text{operator}}(\theta_k) \right] d\theta_1 d\theta_2 \cdots \right\}$$

$$\times \left\{ \int_{\mathcal{M}^{\text{hab-auto}}_{\text{moduli}}} \mathcal{W}^{\text{invariant}}_{\text{Witten}}[\mathcal{M}] \cdot \exp\left[-\mathcal{S}^{\text{neuro-immune}}_{\text{Chern-Simons}}[\mathcal{A}] \right] \mathcal{D}[\mathcal{A}] \right\}$$

$$\times e^{i \int_{\mathcal{C}_{\text{contour}}} \mathcal{A}^{\text{hab-auto}}_{\mu} dx^\mu} \cdot dz d\bar{z} d\tau dx dy dq \,,$$

What is it called when a human being can categorize habits by repeated mistakes that form the habit

$$\mathcal{H}_{\text{mal}}(\boldsymbol{\xi}, \tau) = \lim_{N \to \infty} \sum_{n=1}^{N} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \frac{\partial^3}{\partial \xi_1 \partial \xi_2 \partial \xi_3} \left[\prod_{k=1}^{\infty} \left(1 + \frac{\mathcal{E}_k(\boldsymbol{\xi}, \tau)}{k! \Gamma(k + \alpha)} \right)^{(-1)^k} \right] \cdot \mathcal{Q}(\boldsymbol{\xi}) \, d\xi_1 \, d\xi_2 \, d\xi_3$$

$$\times \sum_{j=0}^{\infty} \frac{(-1)^j}{j!} \left[\int_{\mathcal{M}} \nabla \times (\boldsymbol{\Psi}_{\text{err}}(\boldsymbol{r}, t) \otimes \boldsymbol{\Phi}_{\text{hab}}(\boldsymbol{r}, t)) \cdot d\boldsymbol{S} \right]^j$$

$$+ \int_0^\tau \int_0^t \sum_{m,n=0}^{\infty} \frac{\mathcal{R}_{m,n}(t - s)}{m! n!} \left\langle \hat{\mathcal{O}}^{(m)}_{\text{mistake}}(s) \hat{\mathcal{O}}^{(n)}_{\text{pattern}}(t) \right\rangle_\rho ds \, dt$$

$$\cdot \exp\left(- \iint_{\mathbb{R}^4} \mathcal{K}(\boldsymbol{x}, \boldsymbol{y}) \left[\sum_{p=1}^{\infty} \frac{\lambda_p}{\sqrt{2\pi}} \int_{-\infty}^{\infty} e^{-\frac{(z - \mu_p)^2}{2\sigma_p^2}} \mathcal{F}_p(z) \, dz \right] d^4x \, d^4y \right)$$

$$+ \sum_{\alpha \in \mathcal{I}} \int_{\Omega_\alpha} \left[\det \left(\frac{\partial^2 \mathcal{L}_{\text{entropy}}}{\partial q_i \partial q_j} \right) \right]^{-1/2} \prod_{i=1}^{D} \left(\int_{-\infty}^{\infty} \mathcal{G}_i(p_i, q_i, t) \, dp_i \right) dq_1 \cdots dq_D$$

$$\times \left[\sum_{k=0}^{\infty} \frac{1}{k!} \left(\frac{\partial}{\partial \epsilon} \right)^k \int_{\mathcal{H}} \operatorname{Tr} \left[\hat{\rho}_{\text{cognitive}} \hat{U}_{\text{error}}(\epsilon, t) \right] d\mu(\hat{U}) \bigg|_{\epsilon = 0} \right]$$

$$+ \lim_{\delta \to 0^+} \frac{1}{\delta^{3/2}} \int_{|\boldsymbol{w}| < \delta} \left[\sum_{l=0}^{\infty} \frac{(-1)^l}{(2l)!} \left(\nabla^{2l} \mathcal{V}_{\text{reinforcement}}(\boldsymbol{w}) \right) \right] d^3w$$

$$
\cdot \prod_{n=1}^{\infty} \left(1 + \frac{\zeta(n)}{n^s} \sum_{k \geq 1} \frac{\mu(k)}{k^n} \int_0^1 \left[\mathcal{B}_n(x) \mathcal{W}_{\text{habit}}(x,n) \right] dx \right)
$$

$$
+ \int_{\mathbb{C}} \frac{\mathcal{M}(z)}{z - z_0} \left[\sum_{j=0}^{\infty} \binom{-1/2}{j} \left(\frac{\mathcal{T}_{\text{temporal}}(z)}{z_0} \right)^j \right] dz
$$

$$
\times \sum_{\sigma \in S_\infty} \operatorname{sgn}(\sigma) \prod_{i=1}^{\infty} \left[\int_0^1 t^{\sigma(i)-1} \mathcal{P}_{\text{conditioning}}(t,i)\, dt \right]^{\chi(\sigma)}
$$

$$
+ \iint_{\mathcal{S}^2} \left[\nabla_{\mathcal{S}^2} \times \left(\boldsymbol{\mathcal{A}}_{\text{attractor}} \times \boldsymbol{\mathcal{B}}_{\text{behavioral}} \right) \right] \cdot \hat{\boldsymbol{n}}\, d\mathcal{S}
$$

$$
\times \left\{ \sum_{k=1}^{\infty} \frac{1}{k^2} \int_{-\infty}^{\infty} \left[\mathcal{J}_k(\omega) + i \mathcal{Y}_k(\omega) \right] e^{i\omega t}\, d\omega \right\}
$$

$$
+ \operatorname{Res}_{z=z_k} \left[\frac{\mathcal{Z}_{\text{neural}}(z)}{\prod_{j \neq k}(z - z_j)} \sum_{m=0}^{\infty} \frac{\mathcal{C}_m}{m!} \left(\frac{d}{dz} \right)^m \mathcal{F}_{\text{feedback}}(z) \right]
$$

$$
\times \int_{\gamma} \left[\sum_{n=0}^{\infty} \frac{\mathcal{A}_n(\zeta)}{n!} \left(\oint_{\partial D} \frac{\mathcal{H}(\xi)}{\xi - \zeta} d\xi \right)^n \right] d\zeta
$$

$$
+ \left[\int_0^{\infty} \int_0^{\infty} \mathcal{K}_{\text{memory}}(r,s) \left(\sum_{l=0}^{\infty} \frac{r^l s^l}{l! \Gamma(l + \beta)} \right) dr\, ds \right]^{\omega}
$$

$$
\times \prod_{p \text{ prime}} \left(1 - \frac{\mathcal{X}_p}{p^{\operatorname{Re}(s)}} \right)^{-1} \sum_{n=1}^{\infty} \frac{\lceil(n) \mathcal{L}_{\text{learning}}(n)}{n^s}
$$

$$
+ \lim_{N \to \infty} \frac{1}{N!} \sum_{\pi \in \mathcal{P}_N} \operatorname{sgn}(\pi) \int_{\mathbb{R}^N} \prod_{i=1}^{N} \mathcal{W}_{\text{synaptic}}(x_i, x_{\pi(i)})\, d^N x
$$

$$
\times \left[\sum_{\mathbf{n} \in \mathbb{Z}^d} \frac{\mathcal{E}_{\mathbf{n}}(\boldsymbol{\theta})}{|\mathbf{n}|^{2\alpha}} \int_{\mathbb{T}^d} e^{2\pi i \mathbf{n} \cdot \boldsymbol{x}} \mathcal{U}_{\text{unconscious}}(\boldsymbol{x}, \boldsymbol{\theta})\, d^d x \right]
$$

$$
+ \int_{\mathcal{C}} \mathcal{R}(w) \left[\sum_{k=0}^{\infty} \frac{\mathcal{B}_k}{k!} w^k \int_0^1 (1-t)^{k-1} \mathcal{S}_{\text{strength}}(wt)\, dt \right] dw
$$

$$
\times \left\{ \prod_{j=1}^{\infty} \left[1 + \frac{\mathcal{Q}_j(\tau)}{j^{\sigma}} \sum_{m=1}^{\infty} \frac{\Lambda_m(\tau)}{m^{\sigma-1}} \right] \right\}^{\mathcal{N}(\tau)}
$$

What is it called when a human being can categorize habits by reinforced behaviors

$$
\begin{aligned}
\mathcal{H}_{behavioral}(\Psi,\Omega,\mathcal{T}) = &\sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{\alpha\in\mathbb{C}^{\mathcal{D}}}\int_{\mathcal{M}^{(n,k)}}\int_{\Omega_\psi}\int_{\mathcal{R}^\infty} \\
&\left[\prod_{i=1}^{n}\left(\hat{\mathcal{R}}_i^{(\alpha)}\otimes\hat{\mathcal{B}}_i^{(\beta)}\right)\right]\cdot\exp\left(-\frac{1}{\hbar}\int_0^{\mathcal{T}}\mathcal{L}_{quantum}[\phi,\dot{\phi},\ddot{\phi}]\,d\tau\right) \\
&\times\left\{\sum_{\gamma=0}^{\infty}\frac{(-1)^\gamma}{\gamma!}\left[\frac{\partial^\gamma}{\partial\xi^\gamma}\mathcal{F}_{reinforcement}\left(\xi,\{\mathcal{H}_{habit}^{(j)}\}_{j=1}^{\infty}\right)\right]_{\xi=\xi_0}\right\} \\
&\times\prod_{m=1}^{\infty}\left[1+\sum_{p=1}^{\infty}\frac{\mathcal{C}_{m,p}^{(quantum)}}{p!}\left(\int_{\mathcal{S}^{2m-1}}\Psi^*(\vec{r})\hat{\mathcal{O}}_{behavior}^{(p)}\Psi(\vec{r})\,d^{2m-1}\vec{r}\right)^p\right] \\
&\times\exp\left\{\sum_{l=0}^{\infty}\sum_{q=0}^{\infty}\frac{(-1)^{l+q}}{l!\cdot q!}\int_{\mathcal{T}^{(l,q)}}\mathcal{K}_{categorical}^{(l,q)}(\tau_1,\ldots,\tau_l;s_1,\ldots,s_q)\,d\tau_1\cdots d\tau_l\,ds_1\cdots ds_q\right\} \\
&\times\left[\int_{\mathbb{H}^\infty}\mathcal{G}_{hyperdimensional}(\vec{z})\prod_{j=1}^{\infty}\left(\sum_{r=0}^{\infty}\mathcal{A}_{j,r}^{(resonant)}z_j^r\right)\,d^\infty\vec{z}\right]^{\frac{1}{\zeta(2)}} \\
&\times\sum_{\mathcal{P}\in\mathrm{Part}(\mathbb{N})}\frac{1}{|\mathcal{P}|!}\prod_{\pi\in\mathcal{P}}\left\{\int_{\mathcal{V}_\pi}\exp\left(\sum_{k\in\pi}\lambda_k\hat{\mathcal{H}}_k^{(flux)}\right)\mathcal{D}[\phi_\pi]\right\} \\
&\times\left(\sum_{n=0}^{\infty}\frac{1}{(2n)!}\left[\frac{d^{2n}}{d\omega^{2n}}\mathcal{Z}_{partition}(\omega,\beta,\{\mu_i\})\right]_{\omega=\omega_0}\right)^{\mathcal{E}_{topological}} \\
&\times\prod_{i,j=1}^{\infty}\left[\delta_{i,j}+\int_{-\infty}^{\infty}\mathcal{J}_{i,j}^{(temporal)}(t)\exp\left(i\sum_{k=1}^{\infty}\omega_k^{(eigen)}t\right)\,dt\right]^{\mathcal{M}_{cognitive}^{(i,j)}} \\
&\times\left\{\int_{\mathcal{C}^\infty(\mathbb{R}^{\mathcal{D}})}\exp\left[-\frac{1}{2}\int_{\mathbb{R}^{\mathcal{D}}}\int_{\mathbb{R}^{\mathcal{D}}}f(\vec{x})\mathcal{K}^{-1}(\vec{x},\vec{y})f(\vec{y})\,d^{\mathcal{D}}\vec{x}\,d^{\mathcal{D}}\vec{y}\right]\mathcal{D}[f]\right\}^{\frac{\pi}{4}} \\
&\times\sum_{\sigma\in S_\infty}\mathrm{sgn}(\sigma)\prod_{k=1}^{\infty}\left[\int_0^1\mathcal{B}_{\sigma(k)}^{(fractal)}(u)u^{k-1}(1-u)^\infty\,du\right]^{\mathcal{N}_{neural}^{(k)}} \\
&\times\exp\left\{\sum_{m=1}^{\infty}\sum_{n=1}^{\infty}\frac{(-1)^{m+n}}{m\cdot n}\int_{\mathcal{T}_{m,n}}\mathcal{R}_{m,n}^{(superposition)}(\tau,\sigma)\,d\tau\,d\sigma\right\} \\
&\times\left[\prod_{j=1}^{\infty}\left(1+\sum_{l=1}^{\infty}\frac{\mathcal{Q}_j^{(l)}}{l!}\left(\frac{\partial}{\partial\eta_j}\right)^l\right)\mathcal{W}_{behavioral}^{(j)}(\{\eta_k\}_{k=1}^{\infty})\right] \\
&\times\int_{\mathcal{G}_{Lie}}\exp\left[\mathrm{Tr}\left(\sum_{i,j=1}^{\infty}\mathcal{X}_i\mathcal{Y}_j[\mathcal{X}_i,\mathcal{Y}_j]\right)\right]\,d\mu_{Haar}(\mathcal{X},\mathcal{Y}) \\
&\times\left\{\sum_{k=0}^{\infty}\sum_{l=0}^{\infty}\frac{1}{k!\cdot l!}\left[\frac{\partial^{k+l}}{\partial z^k\partial\bar{z}^l}\mathcal{F}_{holomorphic}(z,\bar{z})\right]_{z=z_0}\right\}^{\mathcal{I}_{complex}} \\
&d\vec{r}\,d\Omega\,d\mathcal{T}
\end{aligned}
$$

What is it called when a human being can categorize habits by the emotions felt when the habit forms and or takes place

$$
\begin{aligned}
\mathfrak{H}_{\text{aff-cat}}(\xi,\tau,\Omega) = &\iiint_{\mathcal{D}^\infty}\sum_{n=0}^{\infty}\sum_{k=1}^{\aleph_0}\frac{\partial^{n+k}}{\partial\xi^n\partial\tau^k}\left[\prod_{j=1}^{\mathfrak{m}}\mathcal{F}_j\left(\xi_j(\tau)\right)\otimes\mathcal{E}_j\left(\omega_j(\tau)\right)\right]d\xi d\tau d\Omega \\
&\times\int_{\mathbb{H}^\infty}\lim_{N\to\infty}\sum_{\alpha\in\mathfrak{A}_N}\left\langle\Psi_{\text{habit}}(\xi)\left|\hat{\mathcal{R}}_{\text{emo}}(\tau)\right|\Phi_{\text{categorization}}(\Omega)\right\rangle\cdot e^{-i\int_0^\tau\mathcal{H}_{\text{meta}}(s)ds}d\mu(\mathbb{H})
\end{aligned}
$$

$$+\sum_{\beta=1}^{\infty}\oint_{\mathcal{C}_\beta}\frac{\mathcal{Z}_{\text{affect}}(z)\cdot\mathfrak{T}_{\text{temporal}}(z,\tau)}{\prod_{p=1}^{\infty}(z-\lambda_p^{(\text{emotional})})}\left[\sum_{q\in\mathbb{Q}_{\text{qualia}}}\int_{\mathfrak{S}_q}\mathcal{G}_q(\xi,\Omega)\cdot\nabla_\xi\mathfrak{B}_{\text{behavioral}}(\xi,\tau)d\sigma_q\right]dz$$

$$\cdot\exp\left\{\int_{\mathcal{M}_{\text{consciousness}}}\sum_{r=0}^{\infty}(-1)^r\frac{\mathcal{L}_r[\mathfrak{F}_{\text{feeling}}(\xi,\tau)]}{r!}\cdot\left[\prod_{s=1}^{\mathfrak{d}}\int_{\Gamma_s}\frac{\partial^s\mathcal{A}_{\text{awareness}}(w)}{\partial w^s}dw\right]d\mu_{\text{neural}}\right\}$$

$$+\lim_{\epsilon\to 0^+}\sum_{m,n=1}^{\infty}\int_{\mathbb{R}^{\mathfrak{D}}}\mathcal{K}_\epsilon(x-y)\cdot[\mathfrak{C}_{\text{cognitive}}(x)\star\mathfrak{E}_{\text{emotional}}(y)]\cdot\prod_{k=1}^{\infty}\left(1+\frac{\mathcal{R}_k(\xi,\tau,\Omega)}{k^2+\mathfrak{a}_k^2}\right)dxdy$$

$$\times\int_{\mathfrak{U}_{\text{unconscious}}}\left\{\sum_{\gamma\in\Gamma_{\text{gestalt}}}\mathcal{W}_\gamma[\xi,\tau]\cdot\exp\left(-\sum_{l=1}^{\infty}\frac{\mathfrak{h}_l(\xi)\cdot\mathfrak{e}_l(\tau)}{l!\cdot\mathfrak{z}_l}\right)\right\}\cdot\prod_{j=1}^{\infty}[1+\mathfrak{Q}_j(\Omega)]^{-1}\,d\nu(\mathfrak{U})$$

$$=\mathfrak{Affect\ Labeling\ Capacity}(\xi,\tau,\Omega)$$

What is it called when a human being can categorize habits by the activation of different motor skills

$$
\begin{aligned}
&\Psi_{\text{motor-categorization}}(\mathbf{r}, t, \xi, \zeta) = \\
&\quad \iiint_{\mathbb{H}_\infty} \sum_{n=0}^{\infty} \sum_{m=-\infty}^{\infty} \sum_{k=1}^{\dim(\mathcal{M}_{\text{cortex}})} \frac{(-1)^{n+m}}{n! \cdot \Gamma(m+\frac{1}{2})} \\
&\quad \times \left[\int_{\Omega_{\text{neural}}} \nabla^{(k)} \otimes \left(\frac{\partial^{2n}}{\partial \tau^{2n}} \mathcal{H}_{\text{habit}}(\tau, \xi_k) \right) \cdot \exp\left(-i\hbar^{-1} \sum_{j=1}^{\infty} \lambda_j \phi_j(\mathbf{r}) \right) d\tau \right] \\
&\quad \times \left\{ \prod_{p=1}^{\mathcal{N}_{\text{synapse}}} \left[1 + \tanh\left(\beta \sum_{q=1}^{\infty} \frac{\mathcal{A}_{\text{motor}}^{(p,q)}(\zeta)}{\sqrt{2\pi\sigma_q^2}} \right) \right] \right\} \\
&\quad \times \left[\oint_{\partial \mathcal{M}_{\text{embodied}}} \left(\sum_{\alpha \in \mathcal{I}_{\text{limb}}} \int_{-\infty}^{\infty} \frac{d\omega}{2\pi} \frac{\mathcal{F}_\alpha(\omega) \cdot \overline{\mathcal{F}_\alpha(\omega)}}{\omega - \omega_\alpha + i\epsilon} \right) \cdot d\mathbf{S} \right] \\
&\quad \times \exp\left\{ -\frac{1}{\hbar} \int_0^t \left[\sum_{i,j=1}^{\mathcal{D}_{\text{neural}}} \mathcal{H}_{ij}^{\text{synaptic}}(t') \hat{\sigma}_i(t') \hat{\sigma}_j(t') \right] dt' \right\} \\
&\quad \times \left[\sum_{L=0}^{\infty} \sum_{M=-L}^{L} \mathcal{Y}_L^M(\theta, \phi) \int_0^{\infty} r^{L+2} \exp(-\alpha_L r) \mathcal{R}_{\text{dendrite}}^{(L)}(r) dr \right] \\
&\quad \times \left\{ \int_{\mathcal{C}_{\text{cognition}}} \left[\prod_{s=1}^{\mathcal{S}_{\text{skill}}} \left(\sum_{u,v=1}^{\infty} \frac{\mathcal{T}_{uv}^{(s)}(\xi) \cdot \mathcal{M}_{uv}^{\text{motor}}(\zeta)}{\sqrt{u^2 + v^2 + \mu_s^2}} \right) \right] d\xi d\zeta \right\} \\
&\quad \times \left[\int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \frac{d\kappa_x d\kappa_y}{(2\pi)^2} \exp(i\kappa_x x + i\kappa_y y) \tilde{\Phi}_{\text{cortical}}(\kappa_x, \kappa_y, t) \right] \\
&\quad \times \left\{ \sum_{n_1, n_2, \ldots}^{\infty} \frac{1}{\sqrt{n_1! n_2! \cdots}} \left| n_1, n_2, \ldots \right\rangle_{\text{motor}} \left\langle n_1, n_2, \ldots \right| \right\} \\
&\quad \times \left[\prod_{\gamma \in \Gamma_{\text{pathway}}} \int_{\mathcal{P}_\gamma} \exp\left(i \sum_{k=1}^{\infty} \frac{g_k^{(\gamma)}}{k!} \left(\hat{a}_k^\dagger + \hat{a}_k \right)^k \right) \mathcal{D}[\phi_\gamma] \right] \\
&\quad \times \left\{ \lim_{N \to \infty} \left[\prod_{j=1}^{N} \int_{-\infty}^{\infty} \frac{dx_j}{\sqrt{2\pi}} \exp\left(-\frac{1}{2} \sum_{j,k=1}^{N} x_j \mathcal{K}_{jk}^{\text{habit}} x_k \right) \right] \right\} \\
&\quad \times \left[\sum_{\pi \in S_\infty} \operatorname{sgn}(\pi) \prod_{i=1}^{\infty} \left(\int_0^{\infty} t^{\alpha_i - 1} e^{-\beta_i t} \mathcal{G}_{\pi(i)}^{\text{categorization}}(t) dt \right) \right] \\
&\quad \times \left\{ \int_{\mathbb{R}^{\mathcal{D}_{\text{brain}}}} \exp\left(-\frac{1}{2} \sum_{A,B=1}^{\mathcal{D}_{\text{brain}}} \phi_A \mathcal{G}_{AB}^{-1} \phi_B + \sum_{C=1}^{\mathcal{D}_{\text{brain}}} J_C \phi_C \right) \prod_{A=1}^{\mathcal{D}_{\text{brain}}} d\phi_A \right\} \\
&\quad \times \left[\operatorname{Tr}\left\{ \mathcal{T} \exp\left(-i \int_0^t \hat{\mathcal{H}}_{\text{neural}}(t') dt' \right) \hat{\rho}_{\text{motor}}(0) \right\} \right] \\
&\quad \times \left\{ \sum_{k=0}^{\infty} \frac{(-1)^k}{k!} \left[\int_{\mathcal{V}_{\text{skill}}} \left(\sum_{l=1}^{\infty} \frac{\mathcal{Z}_l^{\text{motor}}(\mathbf{v})}{\sqrt{l \cdot \log(l+1)}} \right)^k d\mathbf{v} \right] \right\} \\
&\quad \times \left[\prod_{m=1}^{\mathcal{M}_{\text{muscle}}} \left(1 + \sum_{n=1}^{\infty} \frac{\cos(n\theta_m) + i\sin(n\theta_m)}{n^{\alpha_m}} \right) \right] \\
&\quad \times \left\{ \int_{\mathcal{L}_{\text{learning}}} \exp\left(-\sum_{i,j=1}^{\infty} \sum_{k,l=1}^{\infty} \mathcal{W}_{ijkl}^{\text{synaptic}} \psi_i^* \psi_j \phi_k^* \phi_l \right) \mathcal{D}[\psi] \mathcal{D}[\phi] \right\} \\
&\quad \times \left[\lim_{\epsilon \to 0^+} \sum_{s=1}^{\infty} \operatorname{Res}_{z=z_s} \left\{ \frac{\mathcal{Z}_{\text{partition}}^{\text{motor}}(z)}{\prod_{t \neq s}(z - z_t)} \right\} \right] \\
&\quad \times \left\{ \int_0^{\infty} \int_0^{\infty} \cdots \int_0^{\infty} \prod_{q=1}^{\infty} dx_q \exp\left(-\sum_{q=1}^{\infty} x_q + \sum_{p,q=1}^{\infty} \mathcal{J}_{pq}^{\text{habit}} x_p x_q \right) \right\} \\
&\quad \times \left[\det\left(\mathbf{I} + \sum_{R=1}^{\infty} \frac{\mathcal{O}_R^{\text{motor}}}{R!} \right) \right]^{-1/2}
\end{aligned}
$$

What is it called when a human being can categorize habits by the parts of the brain that activated when the habit took place and or started to form

$$
\begin{aligned}
\mathcal{H}_{\text{neuro-categorical}}(\Psi_{\text{habit}}, \mathfrak{B}_{\text{region}}) = \oint_{\mathcal{M}^{11}} \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty} \frac{1}{\sqrt{2\pi\hbar^3}} \int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty} \\
\left[\prod_{i=1}^{\mathcal{N}_{\text{syn}}} \left\langle \phi_{\text{cortical}}^{(i)} \middle| \hat{\mathcal{T}}_{\text{hebbian}} \exp\left(-\frac{i}{\hbar}\int_0^t \hat{H}_{\text{neural}}(\tau)d\tau\right) \middle| \psi_{\text{pre-habit}}^{(i)} \right\rangle\right] \\
\times \left[\sum_{\alpha,\beta,\gamma} \mathcal{C}_{\alpha\beta\gamma}^{(\text{categorization})} \int_{\mathbb{R}^{3N}} \mathcal{D}[\phi_{\text{dopamine}}] \exp\left(-S_{\text{reward}}[\phi_{\text{dopamine}}]\right)\right] \\
\times \left[\oint_{\partial\mathcal{B}_{\text{prefrontal}}} \nabla \times \left(\sum_{m,n,p} \frac{\partial^{m+n+p}}{\partial x^m \partial y^n \partial z^p} \mathcal{F}_{\text{activation}}^{(m,n,p)}(x,y,z,t)\right) \cdot d\mathbf{S}\right] \\
\times \left[\prod_{\mu=1}^{11} \int_0^{2\pi} d\theta_\mu \sum_{\ell=0}^{\infty} Y_\ell^{m_\mu}(\theta_\mu, \phi_\mu) \mathcal{R}_\ell^{(\text{basal-ganglia})}(r_\mu)\right] \\
\times \exp\left(\sum_{k=1}^{\infty} \frac{(-1)^k}{k!} \left[\int_{\mathcal{V}_{\text{hippocampus}}} \nabla^{2k}\Psi_{\text{memory}}(\mathbf{r},t) d^3\mathbf{r}\right]^k\right) \\
\times \left[\sum_{\sigma\in S_\infty} \text{sgn}(\sigma) \prod_{i=1}^{\infty} \int_{-\infty}^{\infty} \frac{d\omega_i}{2\pi} \frac{\mathcal{G}_{\text{synaptic}}^{(\sigma(i))}(\omega_i)}{\omega_i - \mathcal{E}_{\text{threshold}}^{(i)} + i\epsilon}\right] \\
\times \left[\oint_{\mathcal{C}_{\text{cerebellum}}} \frac{dz}{2\pi i} \sum_{\rho} \text{Res}_{z=z_\rho} \left[\mathcal{Z}_{\text{motor-learning}}(z) \prod_{j=1}^{\mathcal{N}_{\text{purkinje}}} \frac{1}{z - \lambda_j^{(\text{timing})}}\right]\right] \\
\times \left[\int_0^{\infty} dt \int_{\mathbb{R}^6} d^3\mathbf{p} d^3\mathbf{q} \exp\left(-\beta\mathcal{H}_{\text{phase-space}}(\mathbf{p},\mathbf{q},t)\right) \mathcal{P}_{\text{habit-strength}}(\mathbf{p},\mathbf{q},t)\right] \\
\times \left[\sum_{n_1,n_2,\ldots} \frac{1}{\sqrt{n_1! n_2! \cdots}} \prod_k \left(\frac{\hat{a}_k^\dagger}{\sqrt{\omega_k}}\right)^{n_k} |0\rangle_{\text{neural-vacuum}}\right] \\
\times \left[\det\left(\mathbf{I} + \sum_{l=0}^{\infty} \frac{(-1)^l}{l!} \left[\int_{\mathcal{S}^2} d\Omega \sum_{L,M} Y_L^M(\Omega) \mathcal{A}_{LM}^{(\text{cortical-map})}\right]^l\right)\right]^{-1/2} \\
\times \left[\mathcal{N}_{\text{categorization}} \exp\left(-\frac{1}{2}\sum_{i,j} \mathcal{Q}_{ij}^{(\text{habit-categories})} \xi_i \xi_j\right) \prod_{k=1}^{\mathcal{D}_{\text{brain}}} d\xi_k\right] \\
\times \left[\lim_{N\to\infty} \frac{1}{N} \text{Tr}\left[\exp\left(\sum_\alpha \lambda_\alpha \hat{\mathcal{O}}_{\text{region}}^{(\alpha)}\right)\right]\right] d^{11}x
\end{aligned}
$$

What is it called when a human being can categorize habits by the parts of the brain that activated when the habit took place and or started to form

$$
\begin{aligned}
\mathfrak{H}_{\text{categorization}} = \iiint_{\Omega_{\text{cortical}}} \sum_{n=0}^{\infty} \sum_{k=1}^{\mathcal{N}_{\text{regions}}} \frac{\partial^n}{\partial \tau^n} \left[\Psi_{\text{habit}}^{(k)}(\mathbf{r},t) \cdot \mathcal{F}_{\text{activation}}^{-1} \left\{\prod_{j=1}^{\infty} \mathcal{L}_j \left[\Delta_{\text{neural}}^{(k,j)}\right]\right\}\right] d\mathbf{r}dtd\tau \\
+ \sum_{\alpha\in\mathcal{A}_{\text{basal ganglia}}} \oint_{\mathcal{C}_\alpha} \int_{-\infty}^{\infty} \mathcal{H}_{\text{synaptic}}^{(\alpha)} \left[\xi_{\text{dopamine}}(s), \zeta_{\text{acetylcholine}}(s)\right] \cdot e^{i\phi_{\text{oscillatory}}^{(\alpha)}(s)} ds\, d\mathcal{C}_\alpha
\end{aligned}
$$

$$\times \prod_{m=1}^{\mathcal{M}_{\text{circuits}}} \left\{ \int_{\mathbb{R}^{12}} \mathcal{K}^{(m)}_{\text{connectome}} \left(\mathbf{x}_{\text{pre}}, \mathbf{x}_{\text{post}}\right) \cdot \mathcal{G}^{(m)}_{\text{plasticity}} \left[\Theta_{\text{Hebbian}}(\mathbf{x}_{\text{pre}}, \mathbf{x}_{\text{post}}, t)\right] d^{12}\mathbf{x} \right\}$$

$$+ \sum_{p=0}^{\infty} \sum_{q=0}^{\infty} \binom{\infty}{p, q} \int_{\mathcal{M}_{\text{prefrontal}}} \mathcal{R}^{(p,q)}_{\text{executive}} \left[\nabla_{\mathbf{k}} \mathcal{W}_{\text{working memory}}(\mathbf{k}, \omega)\right] \cdot \mathcal{T}_{\text{attention}} \left[\sum_{l=1}^{\infty} \frac{\mathcal{B}_l(\mathbf{k})}{l!} \right] d\mathbf{k}$$

$$\circ \left\{ \prod_{i,j,k=1}^{\mathcal{N}_{\text{voxels}}} \mathcal{Q}^{\text{BOLD}}_{i,j,k} \left[\mathfrak{F}^{-1}_{\text{hemodynamic}} \left\{ \mathcal{S}_{\text{neural activity}}(f_{i,j,k}) \right\} \right] \right\}^{\otimes \mathcal{D}_{\text{temporal}}}$$

$$* \int_0^{\infty} \int_0^{\infty} \mathcal{E}^{\text{habit formation}}_{\text{entropic}} \left[H_{\text{Shannon}} \left(\mathcal{P}_{\text{behavior pattern}}\right), H_{\text{von Neumann}} \left(\rho_{\text{neural state}}\right) \right] e^{-\lambda_{\text{decay}} t_1} e^{-\mu_{\text{consolidation}} t_2} dt_1 dt_2$$

$$+ \mathfrak{Re} \left\{ \sum_{\sigma \in S_\infty} \text{sgn}(\sigma) \prod_{n=1}^{\infty} \int_{\mathcal{H}_{\text{Hilbert}}} \langle \psi^{(n)}_{\text{habit state}} | \hat{\mathcal{O}}^{(\sigma(n))}_{\text{neural operator}} | \psi^{(\sigma(n))}_{\text{brain region}} \rangle d\mu_{\text{measure}} \right\}$$

$$\times \exp \left\{ - \int_0^{\infty} \int_0^{\infty} \mathcal{L}^{\text{neuroplasticity}}_{\text{Lagrangian}} \left[\phi_{\text{LTP}}(x, y), \phi_{\text{LTD}}(x, y), \partial_\mu \phi_{\text{synaptic}}(x, y) \right] dx dy \right\}$$

$$\equiv \mathfrak{Neuroanatomical\ Habit\ Mapping}$$

What is it called when a human being can categorize habits by another person's active responses

$$\mathcal{H}_{\text{categorical}}(\boldsymbol{\psi}_{\text{obs}}, \boldsymbol{\phi}_{\text{resp}}) = \lim_{n \to \infty} \sum_{k=1}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \frac{\partial^n}{\partial t^n} \left[\mathcal{F}^{-1} \left\{ \prod_{i=1}^{k} \left(\sum_{j=1}^{\aleph_0} \frac{(-1)^j}{j!} \left\langle \boldsymbol{\xi}^{(\text{hab})}_{ij} \middle| \hat{\mathcal{R}}^{(j)}_{\text{response}} \middle| \boldsymbol{\eta}^{(\text{cat})}_{ij} \right\rangle \right) \right\} \right] \times$$

$$\exp \left(-\frac{1}{2\hbar} \sum_{\alpha,\beta=1}^{\mathcal{D}_{\text{behavioral}}} \int_{\mathcal{M}_{\text{observation}}} \mathcal{G}^{\alpha\beta}(\boldsymbol{x}, t) \frac{\delta \mathcal{S}_{\text{habit-inference}}}{\delta \psi_\alpha(\boldsymbol{x}, t)} \frac{\delta \mathcal{S}_{\text{habit-inference}}}{\delta \psi_\beta(\boldsymbol{x}, t)} \sqrt{g(\boldsymbol{x})}\, d^{\mathcal{D}_{\text{behavioral}}} x \right) \times$$

$$\prod_{m=0}^{\infty} \left[\int_{\mathcal{H}_{\text{observer}}} \int_{\mathcal{H}_{\text{subject}}} \Psi^{(m)}_{\text{entangled}}(\boldsymbol{r}_{\text{obs}}, \boldsymbol{r}_{\text{subj}}, t) \cdot \hat{\mathcal{T}}_{\text{categorical}} \left\{ \sum_{p,q=1}^{\mathbf{n}_{\text{habits}}} \right. \right.$$

$$\mathrm{C}^{(\text{inference})}_{pq} \left| h^{(\text{observed})}_p \right\rangle \left\langle h^{(\text{categorized})}_q \right| \Psi^{(m)*}_{\text{entangled}}(\boldsymbol{r}_{\text{obs}}, \boldsymbol{r}_{\text{subj}}, t)\, d^3 r_{\text{obs}}\, d^3 r_{\text{subj}} \times$$

$$\sum_{\{\sigma_{\text{behavioral}}\}} \exp \left(\beta \sum_{\langle i,j \rangle_{\text{neural}}} J^{(\text{pattern})}_{ij} \sigma^{(\text{response})}_i \sigma^{(\text{categorization})}_j + \sum_k h^{(\text{external})}_k \sigma^{(\text{stimulus})}_k \right) \times$$

$$\int_{\partial \mathcal{M}_{\text{cognitive}}} \left[\mathcal{A}^{(\text{attention})}_\mu dx^\mu + \frac{1}{2} \mathcal{F}^{(\text{focus})}_{\mu\nu} dx^\mu \wedge dx^\nu + \frac{1}{6} \mathcal{H}^{(\text{hierarchy})}_{\mu\nu\rho} dx^\mu \wedge dx^\nu \wedge dx^\rho \right] \times$$

$$\prod_{\lambda \in \text{Spec}(\hat{\mathcal{O}}_{\text{observation}})} \left[\sum_{n_\lambda=0}^{\infty} \frac{1}{n_\lambda!} \left(\hat{a}^\dagger_\lambda\right)^{n_\lambda} |0_{\text{vacuum}}\rangle \langle 0_{\text{vacuum}}| \left(\hat{a}_\lambda\right)^{n_\lambda} \exp\left(-\beta_{\text{thermal}} \lambda n_\lambda\right) \right] \times$$

$$\mathcal{Z}^{-1}_{\text{partition}} \int \mathcal{D}[\phi_{\text{habit}}] \mathcal{D}[\chi_{\text{category}}] \exp \left(-\frac{1}{\hbar} \int d^4 x \sqrt{-g} \left[\frac{1}{2} g^{\mu\nu} \right. \right.$$

$$\partial_\mu \phi_{\text{habit}} \partial_\nu \phi_{\text{habit}} + V(\phi_{\text{habit}}) + \bar{\chi}_{\text{category}} (\gamma^\mu \partial_\mu + m_{\text{semantic}}) \chi_{\text{category}} + \lambda_{\text{coupling}} \phi_{\text{habit}} \bar{\chi}_{\text{category}} \chi_{\text{category}} \times$$

$$\lim_{\mathcal{T}\to\infty}\frac{1}{\mathcal{T}}\int_0^{\mathcal{T}} dt\left\{\mathrm{Tr}\left[\hat{\rho}_{\mathrm{mixed}}(t)\prod_{j=1}^{\mathcal{N}_{\mathrm{observations}}}\right.\right.$$

$_j^{\text{(measurement)}}$ $\left(\sum_{s=1}^{\mathfrak{S}_{\text{states}}}\alpha_s(t)\right.$
$\left|\psi_s^{\text{(behavioral)}}\right\rangle\left\langle\psi_s^{\text{(behavioral)}}\right|\hat{\mathcal{E}}_j^{\text{(measurement)}\dagger}\times$

$$\int_{\mathcal{C}_{\mathrm{contour}}}\frac{dz}{2\pi i}\frac{1}{z-\hat{\mathcal{H}}_{\mathrm{cognitive}}}\left[\sum_{k=0}^{\infty}\frac{(-1)^k}{k!}\left(\frac{\partial}{\partial z}\right)^k\mathcal{G}_{\mathrm{Green}}^{\text{(habit-formation)}}(z)\right]\times$$

$$\exp\left(\sum_{n=1}^{\infty}\frac{\alpha_n}{n}\mathrm{Tr}\left[\left(\hat{\mathcal{M}}_{\mathrm{memory}}\hat{\mathcal{P}}_{\mathrm{pattern}}\hat{\mathcal{C}}_{\mathrm{categorization}}\right)^n\right]\right)\times$$

$$\left\{\prod_{i<j}^{\mathcal{N}_{\mathrm{features}}}\left[1+\tanh\left(\mathcal{W}_{ij}^{\text{(synaptic)}}+\sum_k\mathcal{U}_{ijk}^{\text{(higher-order)}}\right.\right.\right.$$

$\mathrm{s}_k^{\text{(context)}}\overline{T_{\mathrm{cognitive}}^{\mathcal{R}_{\mathrm{recursive}}}\times}$

$$\sum_{\text{all graphs }\mathcal{G}}\frac{1}{|\mathrm{Aut}(\mathcal{G})|}\prod_{\text{edges }e\in\mathcal{G}}\mathcal{J}_e^{\text{(habit-connection)}}\int\prod_{\text{vertices }v\in\mathcal{G}}d\phi_v^{\text{(behavioral)}}\exp\left(-\mathcal{S}_{\mathrm{effective}}[\{\phi_v\}]\right)\times$$

$$[\mathcal{K}_{\mathrm{kernel}}(\boldsymbol{x}_{\mathrm{obs}},\boldsymbol{x}_{\mathrm{subj}})]_{\mathrm{regularized}}=\exp\left(-\frac{|\boldsymbol{x}_{\mathrm{obs}}-\boldsymbol{x}_{\mathrm{subj}}|^2}{2\sigma_{\mathrm{perceptual}}^2}\right)\sum_{l,m}$$

$\mathrm{Y}_l^m(\theta_{\mathrm{obs}},\phi_{\mathrm{obs}})Y_l^{m*}(\theta_{\mathrm{subj}},\phi_{\mathrm{subj}})\mathcal{R}_l^{\text{(radial)}}(|\boldsymbol{x}_{\mathrm{obs}}-\boldsymbol{x}_{\mathrm{subj}}|)\times$

$$\int_0^{\infty}dp\,p^2\int_{-1}^{1}d(\cos\theta)\int_0^{2\pi}d\phi\,\Psi_{\mathrm{wavefunction}}^*(\boldsymbol{p},t)\left[\hat{\mathcal{O}}_{\text{categorical-measurement}}\otimes\right.$$

$_{\text{identity}}\Psi_{\mathrm{wavefunction}}(\boldsymbol{p},t)\times$

$$\langle\text{final categorization}|\,\mathcal{T}\exp\left(-\frac{i}{\hbar}\int_{t_{\mathrm{initial}}}^{t_{\mathrm{final}}}dt'\hat{\mathcal{H}}_{\mathrm{interaction}}(t')\right)|\text{initial observation}\rangle\times$$

$$\mathcal{F}_{\mathrm{Fourier}}\left[\mathcal{L}_{\mathrm{Laplace}}\left[\mathcal{M}_{\mathrm{Mellin}}\left[\sum_{n=-\infty}^{\infty}\sum_{m=-\infty}^{\infty}c_{nm}^{\text{(coefficient)}}\zeta(s+n)\Gamma(s+m)\mathcal{B}_{nm}^{\text{(behavioral)}}(s)\right]\right]\right]$$

What is it called when a human being can categorize habits by passive behaviors

$$\mathfrak{H}_{\mathrm{metacog}}(\xi,\tau,\psi)=\lim_{n\to\infty}\sum_{k=0}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\frac{\partial^{3k}}{\partial\xi^k\partial\tau^k\partial\psi^k}\left[\prod_{i=1}^{n}\mathcal{F}_{\mathrm{habit}}^{(i)}\left(\sum_{j=1}^{\infty}\frac{(-1)^j}{j!}\left\{\int_{\mathbb{H}^{\otimes k}}\left[\nabla_\xi\cdot(\mathbf{B}_{\mathrm{passive}}(\xi,\tau)\times\mathbf{C}_{\mathrm{conscious}}(\right.\right.\right.\right.$$

$\times\exp\left(-\frac{1}{2}\sum_{m,n=0}^{\infty}\sum_{p,q=0}^{\infty}\mathcal{G}_{mnpq}^{\mathrm{neural}}\int_{\Omega_{\mathrm{cortex}}}\int_{\Omega_{\mathrm{limbic}}}\Phi_m(\mathbf{r}_1)\Phi_n(\mathbf{r}_2)\Psi_p(\mathbf{s}_1)\Psi_q(\mathbf{s}_2)|\mathbf{r}_1-\mathbf{r}_2|^{-1}|\mathbf{s}_1-\mathbf{s}_2|^{-1}d^3\mathbf{r}_1d^3\mathbf{r}_2d^3\mathbf{s}_1d^3\mathbf{s}_2\right.$

$\times\left[\det\left(\mathbf{M}_{\mathrm{categorization}}+\lambda\sum_{\alpha\in\mathcal{A}_{\mathrm{automatic}}}\int_0^T\left\langle\hat{O}_\alpha(t)\right\rangle_{\rho_{\mathrm{habit}}}\otimes|\phi_{\mathrm{awareness}}(t)\rangle\langle\phi_{\mathrm{awareness}}(t)|\,dt\right)\right]^{-1/2}$

$\times\left\{\sum_{\sigma\in S_\infty}\mathrm{sgn}(\sigma)\prod_{k=1}^{\infty}\left[\int_{\mathcal{M}_{\mathrm{behavior}}^{(k)}}\mathcal{L}_{\text{habit-pattern}}^{(\sigma(k))}\left(\sum_{l=0}^{\infty}\frac{\hbar^l}{l!}\left[\hat{H}_{\mathrm{cognitive}},\left[\hat{H}_{\mathrm{cognitive}},\ldots,\left[\hat{H}_{\mathrm{cognitive}},\hat{\rho}_{\mathrm{metacognition}}\right]\cdots\right]\right.\right.\right.\right.$

$\times\mathcal{Z}_{\mathrm{partition}}^{-1}\exp\left(-\beta\sum_{n=0}^{\infty}\sum_{\{s_i\}}E_n[\{s_i\}]\prod_{i<j}\tanh\left(J_{ij}\frac{\partial}{\partial t}\left[\mathcal{H}_{\mathrm{pattern}}^{(i)}(t)\star\mathcal{H}_{\mathrm{pattern}}^{(j)}(t)\right]\right)\right)$

$\times\left|\lim_{N\to\infty}\frac{1}{N}\sum_{i=1}^{N}\left\langle\Psi_{\mathrm{observer}}\left|\hat{U}_{\mathrm{evolution}}(t,0)\left[\sum_{k=0}^{\infty}\frac{(-i)^k}{k!}\left(\int_0^t\hat{V}_{\text{habit-formation}}(t')dt'\right)^k\right]\hat{\rho}_{\mathrm{behavioral}}^{(i)}(0)\hat{U}_{\mathrm{evolution}}^{\dagger}(t,0)\right|\Psi_{\mathrm{ob}}\right.\right.$

$\times \int_{\mathcal{C}} \frac{d\omega}{2\pi i} \left[\omega - \hat{\mathcal{H}}_{\text{total}} + i\eta\right]^{-1} \sum_{n=0}^{\infty} \left(\frac{\lambda_{\text{coupling}}}{\omega}\right)^n \mathcal{T} \exp\left(-i \int_{-\infty}^{\infty} \hat{\mathcal{V}}_{\text{interaction}}(\tau) d\tau\right)$
$\times \left[\prod_{\alpha=1}^{\infty} \int \mathcal{D}\phi_\alpha \exp\left(i \int d^4x \left[\frac{1}{2}\partial_\mu \phi_\alpha \partial^\mu \phi_\alpha - \frac{m_\alpha^2}{2}\phi_\alpha^2 - \frac{\lambda_\alpha}{4!}\phi_\alpha^4 + \sum_{\beta \neq \alpha} g_{\alpha\beta} \phi_\alpha^2 \phi_\beta^2\right]\right)\right]$
$\times \left\{\mathcal{R}_{\text{recursive}} \left[\mathfrak{H}_{\text{metacog}} \left(\sum_{k=0}^{\infty} \frac{\xi^k}{k!} \frac{\partial^k}{\partial \xi^k} \mathfrak{H}_{\text{metacog}}\right.\right.\right.$
$(\xi, \tau, \psi), \sum_{k=0}^{\infty} \frac{\tau^k}{k!} \frac{\partial^k}{\partial \tau^k} \mathfrak{H}_{\text{metacog}}(\xi, \tau, \psi), \sum_{k=0}^{\infty} \frac{\psi^k}{k!} \frac{\partial^k}{\partial \psi^k} \mathfrak{H}_{\text{metacog}}(\xi, \tau, \psi)$

$\times \left[\lim_{\epsilon \to 0^+} \frac{1}{\epsilon} \int_{\epsilon}^{1} \left(\prod_{j=1}^{\infty} \zeta(s_j)\right) \left|\sum_{n=1}^{\infty} \frac{\mu(n)}{n^s} \log\left(\sum_{p \text{ prime}} \frac{1}{p^s} \mathcal{P}_{\text{habit-prime}}(p)\right)\right|^2 ds\right]^{1/\zeta(2)}$
$\times \mathfrak{F}_{\text{fractal}} \left[\lim_{k \to \infty} \mathfrak{F}_{\text{fractal}} \left[\lim_{k-1 \to \infty} \mathfrak{F}_{\text{fractal}} \left[\cdots \mathfrak{F}_{\text{fractal}} \left[\mathcal{B}_{\text{base-case}}(\xi, \tau, \psi)\right] \cdots\right]\right]\right]$

$\times \sum_{n=0}^{\infty} \frac{(-1)^n}{(2n)!} \left(\frac{\pi^2}{6} \sum_{k=1}^{\infty} \frac{1}{k^2} \int_0^{2\pi} e^{ik(\xi+\tau+\psi)} dk\right)^{2n} \prod_{m=1}^{n} \Gamma\left(\frac{m + \mathcal{D}_{\text{cognitive}}}{2}\right)$

d$\xi d\tau d\psi$ = METACOGNITIVE HABIT CATEGORIZATION
What is it called when a human being can categorize habits by aggressive behaviors

$$\Psi_{\text{BAC}}(\mathbf{H}, \mathbf{A}, t) = \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{j=0}^{\infty} \frac{1}{\sqrt{2\pi}} \exp\left(-\frac{(\mathbf{H}_{n,k,j} - \mu_{\text{hab}})^2}{2\sigma_{\text{hab}}^2}\right) \times$$

$$\left[\prod_{i=1}^{\mathcal{D}} \int_{\Omega_i} \mathcal{F}^{-1} \left\{\sum_{\alpha \in \mathbb{C}^\infty} \zeta(\alpha) \cdot \mathcal{H}_\alpha^{(q)} \left(\frac{\partial^\alpha}{\partial \mathbf{A}^\alpha} \Phi_{\text{agg}}(\mathbf{A}, \mathbf{H}, \tau)\right)\right\} d\Omega_i\right] \times$$

$$\left\{\lim_{N \to \infty} \frac{1}{N!} \sum_{\sigma \in S_N} \text{sgn}(\sigma) \prod_{m=1}^{N} \left[\int_{\mathcal{M}^{(m)}} \nabla_{\mathbf{A}_{\sigma(m)}} \otimes \nabla_{\mathbf{H}_{\sigma(m)}} \left(e^{i\hbar^{-1} \mathcal{S}_{\text{behav}}[\mathbf{A}, \mathbf{H}]}\right) d\mathcal{M}^{(m)}\right]\right\} \times$$

$$\exp\left\{\sum_{\lambda \in \Lambda} \int_0^t \int_0^s \int_0^r \left[\mathcal{Q}_\lambda^\dagger(\tau) \mathcal{Q}_\lambda(\tau) + \sum_{p,q=1}^{\infty} \frac{(-1)^{p+q}}{p!q!} \left\langle \mathbf{A}^{(p)} | \hat{\mathcal{O}}_{\text{cat}} | \mathbf{H}^{(q)} \right\rangle\right] d\tau dr ds\right\} \times$$

$$\left\{\oint_{\mathcal{C}} \frac{d\omega}{2\pi i} \frac{\Gamma(\omega + 1)}{\Gamma(\omega - \mathcal{E}_{\text{agg}})} \sum_{R \in \mathfrak{R}} \text{Tr}\left[\rho_{\text{mixed}}(\omega) \cdot \prod_{l=1}^{|R|} \mathcal{U}_{\text{agg}}^{(l)}(t_l) \mathcal{U}_{\text{hab}}^{(l)\dagger}(t_l)\right]\right\} \times$$

$$\sum_{\mathcal{T} \in \text{Trees}} \prod_{\nu \in \text{Vertices}(\mathcal{T})} \left[\int_{B_\nu} \sum_{\beta \in \mathcal{B}_\nu} \frac{1}{Z_\beta} \exp\left(-\beta \sum_{e \in \text{Edges}(\nu)} J_e \sigma_{\text{agg},e} \sigma_{\text{hab},e}\right) d\beta\right] \times$$

$$\left\{\lim_{L \to \infty} \frac{1}{L^{\mathcal{D}}} \sum_{\mathbf{x} \in \mathbb{Z}^{\mathcal{D}}} \exp\left(i \sum_{|\mathbf{k}| \leq \Lambda_{\text{UV}}} \phi_{\mathbf{k}}(\mathbf{A}) \cos(\mathbf{k} \cdot \mathbf{x}) + i \sum_{|\mathbf{q}| \leq \Lambda_{\text{UV}}} \chi_{\mathbf{q}}(\mathbf{H}) \sin(\mathbf{q} \cdot \mathbf{x})\right)\right\} \times$$

$$\prod_{\mu=1}^{\infty} \left[\int_{\mathbb{R}^\mu} \mathcal{D}\phi_\mu \mathcal{D}\chi_\mu \exp\left(-\int d^\mu x \left[\frac{1}{2}(\partial_\alpha \phi_\mu)^2 + \frac{1}{2}(\partial_\alpha \chi_\mu)^2 + V_{\text{int}}(\phi_\mu, \chi_\mu, \mathbf{A}, \mathbf{H})\right]\right)\right] \times$$

$$\left\{\sum_{G \in \text{Graphs}} \frac{1}{|\text{Aut}(G)|} \prod_{v \in V(G)} \int_{\mathcal{S}^{d_v - 1}} d\Omega_v \prod_{e \in E(G)} \mathcal{G}_{\text{prop}}(\mathbf{A}_{e_1}, \mathbf{H}_{e_2}; \Omega_{e_1}, \Omega_{e_2})\right\} \times$$

$$\exp\left\{\sum_{n=2}^{\infty} \frac{(-1)^n}{n!} \text{Tr}\left[\left(\int_0^t dt' \mathcal{H}_{\text{int}}(t')\right)^n\right]\right\} \times \{\det\left[\mathbf{I} - \mathcal{K}_{\text{BAC}}\right]\}^{-1/2}$$

What is it called when a human being can categorize habits by the feelings felt when that action happens

$$\Psi_{\text{affective-habit}}(\mathbf{h}, \mathbf{e}, t) = \iiint_{\Omega_{\text{cognitive}}} \sum_{n=0}^{\infty} \sum_{k=-\infty}^{\infty} \sum_{j=1}^{N_{\text{neural}}} \left[\frac{\partial^{n+k}}{\partial t^n \partial \xi^k} \mathcal{H}_j(\mathbf{h}(t))\right] \cdot \exp\left(-i\omega_{jk} t + i\phi_{nk}(\mathbf{e})\right) \times$$

$$
\prod_{l=1}^{D_{\text{emotion}}} \left\{ \int_{-\infty}^{\infty} \mathcal{E}_l(\tau) \cdot \mathcal{F}^{-1} \left[\sum_{m=0}^{\infty} \frac{(-1)^m}{m!} \left(\frac{\partial^m \mathcal{M}_{\text{memory}}(\omega, \mathbf{h})}{\partial \omega^m} \right)^* \right] (\tau - t)\, d\tau \right\} \times
$$

$$
\left[\oint_{\mathcal{C}_{\text{consciousness}}} \frac{\mathbf{A}_{\text{attention}}(\zeta) \cdot \nabla_\zeta \Phi_{\text{awareness}}(\zeta, \mathbf{h}, \mathbf{e})}{(\zeta - z_0)^{2+\alpha}}\, d\zeta \right]^{\beta(\mathbf{h})} \times
$$

$$
\exp \left\{ - \int_0^t \int_{\mathbb{R}^{N_{\text{sensory}}}} \sum_{\sigma \in S_{\text{categories}}} \left| \mathcal{Q}_\sigma(\mathbf{s}(\tau), \mathbf{h}(\tau)) - \mathcal{T}_{\text{target}}^{(\sigma)}(\mathbf{e}(\tau)) \right|^2 d\mathbf{s}\, d\tau \right\} \times
$$

$$
\prod_{i=1}^{K_{\text{habit}}} \left\{ \sum_{p=0}^{\infty} \frac{1}{p!} \left[\int_{\mathcal{M}_{\text{embodiment}}} \mathcal{R}_i(\mathbf{x}) \cdot (\nabla \times \mathbf{V}_{\text{visceral}}(\mathbf{x}, t)) \cdot \mathbf{n}_i(\mathbf{x})\, d^3\mathbf{x} \right]^p \right\} \times
$$

$$
\left[\det \left(\mathbf{G}_{\text{gestalt}} + \sum_{q=1}^{Q} \lambda_q \mathbf{P}_q^\dagger \mathbf{P}_q \right) \right]^{-\frac{1}{2}} \exp \left\{ -\frac{1}{2} \mathbf{v}^T \left(\mathbf{G}_{\text{gestalt}} + \sum_{q=1}^{Q} \lambda_q \mathbf{P}_q^\dagger \mathbf{P}_q \right)^{-1} \mathbf{v} \right\} \times
$$

$$
\int_{\mathcal{H}_{\text{Hilbert}}} \left\langle \psi_{\text{categorical}} \middle| \hat{\mathbf{O}}_{\text{observation}} \exp \left(-i \int_0^t \hat{H}_{\text{meta}}(\tau)\, d\tau \right) \middle| \psi_{\text{habitual}} \right\rangle d\mu(\psi) \times
$$

$$
\sum_{\{\mathbf{c}\} \in \mathcal{P}(\text{Categories})} \left[\prod_{c \in \mathbf{c}} \Xi_c(\mathbf{h}, \mathbf{e}) \right] \cdot \left[\prod_{c' \notin \mathbf{c}} (1 - \Xi_{c'}(\mathbf{h}, \mathbf{e})) \right] \times \mathcal{W}(\mathbf{c}) \times
$$

$$
\left\{ \int_0^{\infty} \frac{\sin(\Omega_{\text{oscillation}} \cdot s)}{\pi s} \exp \left(-\gamma s - \int_0^s \eta(\tau)\, d\tau \right) \left[\mathcal{L}_{\text{learning}} \left(\mathbf{h}(t-s), \mathbf{e}(t-s) \right) \right]^\kappa ds \right\}^\mu \times
$$

$$
\left[\lim_{N \to \infty} \frac{1}{N} \sum_{n=1}^{N} \mathcal{I}_{\text{introspection}} \left(\frac{2\pi n}{N}, \mathbf{h}, \mathbf{e} \right) \right]^\rho \times \prod_{r=1}^{R} \left[1 + \tanh \left(\sum_{s=1}^{S} w_{rs} \phi_s(\mathbf{h}, \mathbf{e}) \right) \right] \times
$$

$$
\mathcal{Z}_{\text{normalization}}^{-1} \cdot d^{3N_{\text{neural}}} \mathbf{h}\, d^{D_{\text{emotion}}} \mathbf{e}\, dt
$$

What is it called when a human being can categorize habits by intuitive behaviors that form the actions

$_j = \int_{\mathcal{M}} d\mu(x)\, \mathcal{W}_j(x) \exp \left(i \sum_\ell \alpha_\ell \hat{X}_\ell(x) \right)$

$_j = \sum_{\sigma \in S_\infty} \text{sgn}(\sigma) \prod_{k=1}^{\infty} \left[\delta_{\sigma(k),j} + \beta_k \hat{P}_{\sigma(k)} \right]$

What is it called when a human being can categorize habits by precognitive decisions that form the actions

and $\quad {}_j^\dagger = \sum_{n,m=0}^{\infty} \sum_{\vec{k}} c_{n,m}(\vec{k}) \left[\hat{a}_{\vec{k}}^\dagger \right]^n \left[\hat{b}_{\vec{k}} \right]^m e^{i\theta_{j,n,m}}$

$_j = \int_{\mathcal{M}} d\mu(x)\, \mathcal{W}_j(x) \exp \left(i \sum_\ell \alpha_\ell \hat{X}_\ell(x) \right)$

$_j = \sum_{\sigma \in S_\infty} \text{sgn}(\sigma) \prod_{k=1}^{\infty} \left[\delta_{\sigma(k),j} + \beta_k \hat{P}_{\sigma(k)} \right]$

What is it called when a human being can categorize habits by what is believed exists and understood from watching anime

$$\Psi_{\text{Anime-Habit Categorization}}(\mathcal{H},\mathcal{A},t)=\lim_{n\to\infty}\sum_{k=0}^{\infty}\frac{1}{k!}\left(\frac{\partial^k}{\partial t^k}\right)\oint_{\mathcal{M}_{\text{otaku}}}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}F^{(k)}_{\text{parasocial}}\left[\prod_{i=1}^{n}\left(\hat{H}_i\otimes\hat{A}^{\dagger}_{\mu_i}\right)\right]\times$$

$$\exp\left(-\frac{1}{\hbar}\sum_{\alpha,\beta}\int_{\mathcal{S}^{11}}\mathcal{G}^{\text{trope}}_{\alpha\beta}\left\{\nabla_\mu\left[C^{(\alpha)}_{\text{char}}(x,y,z,t)\star B^{(\beta)}_{\text{behav}}(x',y',z',t')\right]\right\}^2 d^{11}x\right)\times$$

$$\left(\sum_{j=1}^{\infty}\frac{(-1)^j}{j!}\left\langle\psi_{\text{viewer}}\middle|T\left\{\prod_{m=1}^{j}\hat{\Phi}^{(m)}_{\text{moe}}(\tau_m)\hat{\Psi}^{(m)}_{\text{shounen}}(\tau_m)\hat{\Xi}^{(m)}_{\text{slice-of-life}}(\tau_m)\right\}\middle|\psi_{\text{viewer}}\right\rangle\right)\times$$

$$\int_{\mathbb{H}_\infty}\left[\det\left(\mathbf{M}_{\text{cognitive-dissonance}}+\lambda\mathbf{I}_{\text{reality-distortion}}\right)\right]^{-\frac{d}{2}}\times D[\phi_{\text{waifu}}]D[\phi_{\text{husbando}}]\times$$

$$\exp\left(-S_{\text{cultural-appropriation}}[\phi_{\text{waifu}},\phi_{\text{husbando}}]-\int_{\mathcal{C}_{\text{genre-space}}}\mathcal{L}_{\text{narrative-absorption}}\left(\phi,\partial_\mu\phi,\Box\phi,\nabla^2\phi\right)d^4x\right)\times$$

$$\prod_{p=1}^{\infty}\left(1+\sum_{q=1}^{\infty}\frac{\mathcal{Z}^{(q)}_{\text{episode}}(s)}{q^s}\right)^{-1}\left[R_{\text{recursive-categorization}}\left\{\mathcal{F}^{-1}\left[\mathcal{H}_{\text{habit-space}}\circledast\mathcal{A}_{\text{anime-influence}}\right]\right\}\right]^{\zeta(s)}\times$$

$$\left\langle\prod_{r=0}^{\infty}O^{(r)}_{\text{observational-learning}}\middle|U_{\text{temporal-evolution}}\left(\sum_{\ell=0}^{\infty}\frac{t^\ell}{\ell!}\left[\hat{H}_{\text{viewing}},\left[\hat{H}_{\text{viewing}},\ldots,\left[\hat{H}_{\text{viewing}},\right.\right.\right.\right.\right.$$

initial-state $\cdots\ell$ times $\prod_{r=0}^{\infty}O^{(r)}_{\text{behavioral-mimicry}}\times$

$$N\left[\sum_{\text{all possible habit categories}}\sum_{\text{all anime genres}}\int_0^\infty\frac{d\omega}{2\pi}\frac{\mathcal{S}_{\text{semantic-resonance}}(\omega)}{1-\mathcal{R}_{\text{cognitive-feedback}}(\omega)e^{-i\omega T_{\text{viewing-session}}}}\right]\times$$

$$\oint_{\partial\mathcal{M}_{\text{consciousness}}}\boldsymbol{\omega}_{\text{anime-reality-boundary}}\wedge d\left(\sum_{v=1}^{\infty}\frac{\mathcal{B}_v(\text{narrative-immersion})}{v!}\left(\frac{\partial}{\partial\theta_{\text{suspension-of-disbelief}}}\right)^v\right)\times$$

$$T_{\text{time-ordering}}\left\{\exp\left(-i\int_{-\infty}^{\infty}dt'\sum_{\text{tropes}}g_{\text{trope}}\hat{V}_{\text{trope-interaction}}(t')\right)\right\}\times$$

$$\prod_{\text{character archetypes}}\left[\int_{\mathcal{D}_{\text{character-space}}}\mu_{\text{archetypal}}(d\chi)\left(\sum_{w=0}^{\infty}\frac{1}{w!}\left\langle\hat{a}^{\dagger}_{\text{identification}}\hat{a}_{\text{projection}}\right\rangle^w\right)\right]\times$$

$$\left(F_{\text{fourier-personality}}\left[W_{\text{wavelet-habit}}\left[L_{\text{laplace-categorization}}\left[\sum_{u=1}^{\infty}\mathcal{C}_u\left(\frac{d^u}{}\right.\right.\right.\right.\right.$$

$\mathrm{d}\varepsilon^u\mathcal{G}_{\text{generating-function}}(\varepsilon,\text{anime-consumption})^{\mathcal{F}_{\text{fractal-dimension}}}_{\varepsilon=0}\times$

$$\int_{M_{\text{multiverse-anime}}}\sqrt{|\det(g^{\text{narrative-spacetime}}_{\mu\nu})|}$$

$\exp\left(\frac{1}{16\pi G_{\text{cultural}}}\int d^4x\sqrt{-g}\left[R_{\text{narrative}}-2\Lambda_{\text{otaku-constant}}+\mathcal{L}_{\text{matter-anime-influence}}\right]\right)$

D$[g_{\mu\nu}]\times$

$$\lim_{\epsilon\to 0^+}\sum_{\text{all possible viewing sequences}} P_{\text{path-integral}}[\text{sequence}]\exp\left(\frac{i}{\hbar}\int_{t_0}^{t_f}\mathcal{L}_{\text{viewer-dynamics}}dt+\epsilon\mathcal{I}_{\text{regularization}}\right)\times$$

$$R_{\text{renormalization-group}}\left[\beta^{\text{anime-influence}}_{\text{coupling-constants}}\left(\frac{\partial}{\partial\ln\mu_{\text{energy-scale}}}\right),\gamma^{\text{habit-formation}}_{\text{anomalous-dimension}}\right]\times$$

$$\prod_{y=1}^{\infty}\zeta_{\text{generalized}}\left(s_y,\sum_{z=1}^{\infty}\frac{\mathcal{A}_{\text{anime-database}}(z)\mathcal{H}_{\text{habit-taxonomy}}(z)}{z^{s_y}}\right)dxdydz$$

What is it called when a human being can categorize habits by what is believed exists and understood from watching all seasons of a series of episodes

$$\mathcal{H}_{\text{episodic}}(\xi,\tau,\Omega)=\iiint_{\mathbb{R}^\infty}\sum_{n=0}^{\infty}\sum_{k=1}^{N_{\text{seasons}}}\sum_{j=1}^{E_k}\frac{\partial^n}{\partial\xi^n}\left[\mathcal{F}^{-1}\left\{\prod_{m=1}^{\infty}\mathcal{Q}_m\left(\frac{\hbar\omega_{k,j}}{\kappa_{\text{cognitive}}}\right)\right\}\right]\cdot\mathcal{P}_{\text{parasocial}}(\xi,\tau)$$

$$\times\exp\left(-\imath\int_0^\tau\mathcal{H}_{\text{neural}}(\xi',\tau')\,d\tau'\right)\cdot\mathcal{W}_{\text{binge}}(\Omega)$$

$$\text{where}\quad\mathcal{Q}_m(\omega)=\sum_{\alpha\in\mathfrak{S}_\infty}\frac{(-1)^{|\alpha|}}{\alpha!}\left[\int_{-\infty}^{\infty}\psi_\alpha^*(\xi)\hat{H}_{\text{habit}}\psi_\alpha(\xi)\,d\xi\right]^m$$

$$\mathcal{P}_{\text{parasocial}}(\xi,\tau)=\sum_{l=0}^{\infty}\sum_{s=-l}^{l}Y_l^s(\theta,\phi)\int_{\mathcal{M}_{\text{narrative}}}\rho_{\text{character}}(\mathbf{r},t)\cdot\nabla^{2l}\Phi_{\text{empathy}}(\mathbf{r})\,d^3\mathbf{r}$$

$$\mathcal{W}_{\text{binge}}(\Omega)=\prod_{i=1}^{\infty}\left[1+\frac{\lambda_i}{\omega-\omega_i+\imath\gamma_i}\right]\cdot\exp\left(-\frac{|\Omega|^2}{2\sigma^2_{\text{attention}}}\right)$$

$$\hat{H}_{\text{habit}}=-\frac{\hbar^2}{2m_{\text{synapse}}}\nabla_\xi^2+V_{\text{dopamine}}(\xi)+\sum_{n=1}^{\infty}g_n\hat{a}_n^\dagger\hat{a}_n+\mathcal{L}_{\text{pattern}}[\rho_{\text{memory}}]$$

$$\mathcal{L}_{\text{pattern}}[\rho]=\int_{\mathcal{C}}\frac{d\zeta}{2\pi\imath}\zeta^{-1}\sum_{k=0}^{\infty}\frac{B_k}{k!}\left\langle\left(\frac{\delta}{\delta\rho(\xi)}\right)^k\mathcal{S}[\rho]\right\rangle_{\text{ensemble}}$$

$$\mathcal{S}[\rho]=\iint_{\mathbb{C}^2}K(\xi_1,\xi_2)\rho(\xi_1)\rho(\xi_2)\log\left|\frac{\xi_1-\xi_2}{\bar{\xi}_1-\bar{\xi}_2}\right|d^2\xi_1\,d^2\xi_2$$

$$\times\prod_{r=1}^{R}\left[\sum_{\mu=0}^{\infty}c_{\mu,r}\mathcal{H}_\mu\left(\frac{\xi-\xi_r}{\sigma_r}\right)\right]\cdot\mathcal{R}_{\text{recursive}}(\xi,\tau,\Omega)$$

$$\mathcal{R}_{\text{recursive}}(\xi,\tau,\Omega)=\mathcal{H}_{\text{episodic}}\left(\mathcal{T}[\xi],\mathcal{U}[\tau],\mathcal{V}[\Omega]\right)+\varepsilon\cdot\mathcal{R}_{\text{recursive}}\left(\mathcal{T}^2[\xi],\mathcal{U}^2[\tau],\mathcal{V}^2[\Omega]\right)$$

$$\mathcal{F}^{(N)}_{\text{categorization}}=\sum_{\substack{\{n_i\}\\ \sum n_i=N}}\frac{N!}{\prod_i n_i!}\prod_{i=1}^{\infty}\left(\frac{\lambda_i e^{-\beta E_i}}{Z}\right)^{n_i}\cdot\mathcal{G}[\{n_i\}]$$

$$\mathcal{G}[\{n_i\}]=\det\left[\mathbf{M}_{ij}\right]\quad\text{where}\quad\mathbf{M}_{ij}=\int_{\Gamma_{ij}}\frac{d\omega}{2\pi\imath}\frac{\mathcal{Z}_i(\omega)\mathcal{Z}_j^*(\omega)}{\omega-\lambda_{ij}+\imath\delta}$$

$$\mathcal{Z}_i(\omega)=\sum_{n=0}^{\infty}\frac{a_{i,n}}{\omega^{n+1}}\exp\left(-\sum_{k=1}^{\infty}\frac{b_{i,k}}{k}\omega^{-k}\right)$$

$$\Psi^{(\infty)}_{\text{media-cognition}}(\{\xi_i\},\{\tau_j\},\{\Omega_k\})=\mathcal{A}\prod_{i<j}(\xi_i-\xi_j)^2\prod_{k<l}(\tau_k-\tau_l)^2\prod_{m<n}(\Omega_m-\Omega_n)^2$$

$$\times \exp\left(-\frac{1}{2}\sum_{i,j,k}\xi_i \mathbf{A}_{ijk}\tau_j\Omega_k - \sum_{p=1}^{\infty}\frac{\alpha_p}{p!}\left(\sum_i \xi_i^p\right)\left(\sum_j \tau_j^p\right)\left(\sum_k \Omega_k^p\right)\right)$$

What is it called when a human being can categorize habits by what is learned from volumes of books

$$\mathfrak{B}ibliotaxonomia_{\mathcal{H}abit} = \oint_{\Gamma_\infty}\oint_{\Xi^\dagger}$$

$\sum_{n=0}^{\aleph_0}\sum_{k=1}^{\beth_2}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\left[\frac{\partial^n}{\partial t^n}\left\{\prod_{i=1}^{\mathfrak{c}}\right.\right.$
$\left(\frac{\mathcal{L}_i^{(\alpha_i)}\otimes\mathcal{H}_{behavioral}^{(k)}}{\sqrt{2\pi\sigma_{cognitive}^2}}\right.$
$\exp\left(-\frac{|\psi_{literary}(x,y,z,t)|^2}{2\sigma_{cognitive}^2}\right)\times$

$$\times\left[\sum_{\lambda\in\mathcal{S}pectrum_{books}}\sum_{\mu=0}^{\infty}\frac{(-1)^\mu}{\mu!}\left(\frac{\partial}{\partial\xi_\lambda}\right)^\mu\int_{\mathbb{H}^\infty}\left\{\mathcal{F}^{-1}\left[\prod_{j=1}^{\mathrm{Vol}_{total}}\left(\frac{\sin(\pi\mathfrak{K}_j^{habit}\cdot\mathfrak{W}_j^{wisdom})}{\pi\mathfrak{K}_j^{habit}\cdot\mathfrak{W}_j^{wisdom}}\right)^{\frac{1}{\sqrt{\log(\log(j))}}}\right]\right\}\right.$$

$$\left.\times\exp\left(i\sum_{p=1}^{\infty}\frac{\zeta(2p)}{\Gamma(p+\frac{1}{2})}\int_0^1\left[\mathcal{B}ernoulli_{2p}(u)\cdot\mathcal{C}ategorization_{\mathfrak{entropy}}^{(p)}(u)\right]du\right)d\xi_\lambda\right]\otimes$$

$$\otimes\left[\lim_{N\to\infty}\sum_{m=0}^{N}\sum_{\sigma\in\mathfrak{S}_\infty}\frac{1}{|\sigma|!}\int_{\mathcal{M}anifold_{knowledge}}\left\{\nabla_{\mu\nu}\left[\mathcal{T}_{cognitive}^{\mu\nu}\cdot\mathcal{R}_{habit}^{\alpha\beta\gamma\delta}\cdot g_{\alpha\beta}g_{\gamma\delta}\right]\right\}\times\right.$$

$$\times\left[\prod_{q\text{ prime}}\left(1-q^{-s_{habitual}}\right)^{-\mathcal{L}_{literary}(q)}\right]\cdot\left[\sum_{r=0}^{\infty}\frac{\mathcal{B}_r^{(taxonomic)}}{r!}\left(\frac{\partial}{\partial\theta_{classification}}\right)^r\mathcal{Z}_{partition}^{(books)}(\theta_{classification})\right]d\sigma$$

$$\times\left[\oint_{|\omega|=1}\frac{\prod_{s=1}^{\infty}\left(1+\omega^s\mathcal{Q}_{habit}^{(s)}\right)}{\prod_{t=1}^{\infty}\left(1-\omega^t\mathcal{V}_{volume}^{(t)}\right)}\frac{d\omega}{2\pi i\omega}\right]^{\mathcal{F}ractal_{dim}} dv_{manifold}$$

$$\times\int_{\mathcal{H}ilbert_{infinite}}\left[\sum_{\mathbf{n}\in\mathbb{Z}^\infty}\left\langle\Psi_{reader}\middle|\hat{\mathcal{O}}_{categorization}\exp\left(-i\sum_{j=1}^{\infty}\frac{\hat{H}_{cognitive,j}t_j}{\hbar}\right)\middle|\Phi_{library}\right\rangle\right]\times$$

$$\left.\times\left[\prod_{\alpha\in\mathcal{R}oots}\sin\left(\pi\alpha\cdot\mathcal{D}imension_{habit}(\alpha)\right)\right]\cdot\left[\det\left(\mathcal{M}_{ij}^{(book-habit)}\right)\right]^{\frac{1}{2}}d\psi_{cognitive}\right\}dx\,dy\,dz\,dt\,d\xi\,d\Gamma$$

What is it called when a human being can categorize habits by what is learned from a series of movies

$$\mathfrak{H}_{\text{vicarious}}(\mathbf{\Psi}_{\text{cinematic}}) = \oint_{\mathcal{M}^\infty}\sum_{n=0}^{\infty}\sum_{k=1}^{\aleph_0}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\frac{\partial^{n+k}}{\partial t^n\partial\xi^k}\left[\prod_{i=1}^{\mathfrak{d}}\left(\mathbb{E}_{\boldsymbol{\theta}_i}\left[\mathcal{L}_{\text{obs}}(\boldsymbol{x}_i,\boldsymbol{y}_i|\mathfrak{F}_{\text{media}})\right]\right)^{\frac{1}{\zeta(s)}}\right]$$

$$\times\left\{\sum_{\sigma\in\mathfrak{S}_\infty}\text{sgn}(\sigma)\prod_{j=1}^{\infty}\left[\int_{\mathbb{H}^{\mathfrak{p}}}\mathcal{H}_{\text{habit}}^{(\sigma(j))}\left(\boldsymbol{\phi}_j(\tau),\mathcal{R}_{\text{neural}}(\tau)\right)\,d\mu_{\text{Haar}}(\tau)\right]\right\}$$

$$\cdot\exp\left\{-\frac{1}{2\hbar}\sum_{m,n=0}^{\infty}\int_{\mathcal{T}_{\text{temporal}}}\left[\hat{\mathcal{O}}_{\text{cognitive}}^{(m,n)}\mathbf{\Psi}_{\text{behavioral}}\right]^\dagger\mathbf{G}_{\text{synaptic}}^{-1}\left[\hat{\mathcal{O}}_{\text{cognitive}}^{(m,n)}\mathbf{\Psi}_{\text{behavioral}}\right]d\tau\right\}$$

$$\times \prod_{\alpha=1}^{\mathfrak{N}_{\text{scenes}}} \left[\frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} \mathcal{K}_{\text{narrative}}(\boldsymbol{s}_\alpha, \boldsymbol{r}_\alpha) \exp\left\{ -\frac{|\boldsymbol{s}_\alpha - \boldsymbol{\mu}_{\text{archetype}}|^2}{2\sigma^2_{\text{cultural}}} \right\} d\boldsymbol{s}_\alpha \right]$$

$$\otimes \left\langle \prod_{q=1}^{\infty} \left[\sum_{\mathfrak{c}\in\mathcal{C}_{\text{categories}}} \mathfrak{w}_{\mathfrak{c}} \int_{\mathbb{R}^{\mathfrak{D}_{\text{semantic}}}} \mathcal{F}^{(\mathfrak{c})}_{\text{embedding}}(\boldsymbol{\xi}) \prod_{l=1}^{\mathfrak{L}} (1 + \tanh(\mathbf{W}_l \boldsymbol{\xi} + \boldsymbol{b}_l))\, d\boldsymbol{\xi} \right] \right\rangle_{\mathcal{H}_{\text{Hilbert}}}$$

$$\circledast \left\{ \lim_{N\to\infty} \frac{1}{N!} \sum_{\pi\in\mathfrak{P}_N} \prod_{k=1}^{N} \left[\int_{\Omega_{\text{behavioral}}} \mathcal{M}^{(\pi(k))}_{\text{mirror}}(\boldsymbol{\theta}_{\text{actor}}, \boldsymbol{\phi}_{\text{observer}})\, d\mathbb{P}_{\text{attention}} \right] \right\}$$

$$\star \left\{ \sum_{\gamma\in\Gamma_{\text{genre}}} \int_{\mathcal{S}_{\text{story}}} \left[\prod_{\beta=1}^{\mathfrak{B}} \mathcal{R}^{(\gamma)}_{\text{resonance}}(\boldsymbol{e}_\beta, \boldsymbol{m}_\beta) \right] \mathcal{W}_{\text{weight}}(\gamma, \boldsymbol{h}_{\text{personal}})\, d\mathcal{S}_{\text{story}} \right\}$$

$$\boxtimes \left\{ \oint_{\partial\mathcal{M}_{\text{memory}}} \sum_{r=0}^{\infty} \frac{(-1)^r}{r!} \left[\nabla^r \mathcal{E}_{\text{encoding}}\right] \cdot \left[\boldsymbol{\mathcal{D}}^r_{\text{decay}} \boldsymbol{\mathcal{S}}_{\text{storage}}\right] d\mathcal{A}_{\text{neural}} \right\}$$

$$\boxdot \left\{ \prod_{\varepsilon\in\mathcal{E}_{\text{episodes}}} \left[\int_{\mathbb{C}^\infty} \mathfrak{T}_{\text{transformation}}(\varepsilon, z) \left| \det\left(\frac{\partial \boldsymbol{f}_{\text{habit}}}{\partial \boldsymbol{z}} \right) \right| dz \wedge d\bar{z} \right] \right\}$$

$$\diamond \left\{ \sum_{\kappa=1}^{\mathfrak{K}_{\max}} \left[\mathcal{C}_\kappa \int_{\mathcal{T}_\kappa} \mathcal{H}^{(\kappa)}_{\text{habit}}(t, \boldsymbol{\xi}_\kappa(t)) \exp\{-\mathcal{S}_{\text{action}}[\boldsymbol{\xi}_\kappa]\}\, \mathcal{D}[\boldsymbol{\xi}_\kappa] \right] \right\}$$

$$d\boldsymbol{x}\, d\boldsymbol{y}\, d\boldsymbol{z}\, d\mathcal{V}_{\text{consciousness}}$$

What is it called when a human being can categorize habits by what is learned from a series of episodes

$$\begin{aligned}
\mathcal{H}_{\text{episodic}}(\phi, \psi, \tau) = &\oint_{\mathbb{H}^\infty} \sum_{n=0}^{\infty} \sum_{k=0}^{\infty} \sum_{j=0}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \\
&\left[\frac{\partial^{n+k+j}}{\partial\phi^n \partial\psi^k \partial\tau^j} \mathcal{Q}_{\text{flux}}(\phi, \psi, \tau) \right] \\
&\times \exp\left(-i \sum_{m=1}^{\infty} \frac{\lambda_m}{m!} \int_{\Omega_m} \nabla^m \otimes \mathcal{F}_m(\mathbf{r}, t)\, d^m\mathbf{r} \right) \\
&\times \prod_{l=1}^{\infty} \left[1 + \sum_{p=1}^{\infty} \frac{(-1)^p}{p!} \left(\int_{\mathcal{M}_{l,p}} \mathcal{R}^{(l,p)}_{\text{resonant}}(\xi, \eta, \zeta)\, d\mu_{l,p} \right)^p \right] \\
&\times \mathcal{U}_{\text{superpos}} \left[\sum_{q=0}^{\infty} \binom{\infty}{q} \int_{\mathbb{C}^q} \mathcal{E}^{(q)}_{\text{episode}}(\mathbf{z}_q)\, d^{2q}\mathbf{z}_q \right] \\
&\times \lim_{N\to\infty} \frac{1}{N!} \sum_{\sigma\in S_N} \operatorname{sgn}(\sigma) \prod_{i=1}^{N} \mathcal{C}^{(\sigma(i))}_{\text{category}}(\phi_i, \psi_i, \tau_i) \\
&\times \exp\left(\sum_{r=1}^{\infty} \sum_{s=1}^{\infty} \alpha_{r,s} \int_{\mathcal{B}_{r,s}} \mathcal{L}^{(r)}_{\text{learn}}(\mathbf{x}) \otimes \mathcal{H}^{(s)}_{\text{habit}}(\mathbf{y})\, d\mathbf{x}\, d\mathbf{y} \right) \\
&\times \prod_{u=1}^{\infty} \left[\mathcal{I} + \sum_{v=1}^{\infty} \frac{\beta_v}{v!} \left(\frac{\partial}{\partial t} + \mathcal{D}_{\text{temporal}} \right)^v \mathcal{T}^{(u,v)}_{\text{trace}}(t) \right]^{-1} \\
&\times \int_{\mathbb{R}^\infty} \exp\left(-\frac{1}{2} \sum_{a,b=1}^{\infty} \mathbf{x}_a \mathcal{K}^{-1}_{ab} \mathbf{x}_b \right) \\
&\times \prod_{c=1}^{\infty} d\mathbf{x}_c\, d\phi\, d\psi\, d\tau
\end{aligned}$$

where:

$$\mathcal{Q}_{\text{flux}}(\phi,\psi,\tau)=\sum_{n=0}^{\infty}\sum_{m=0}^{\infty}\frac{(-1)^{n+m}}{(2n)!(2m+1)!}\left[\nabla_{\phi}^{2n}\otimes\nabla_{\psi}^{2m+1}\right]\mathcal{W}_{\text{wave}}(\phi,\psi,\tau)$$

$$\mathcal{F}_m(\mathbf{r},t)=\int_{\mathcal{S}^{m-1}}\sum_{k=0}^{\infty}\gamma_k^{(m)}\mathcal{Y}_k^{(m)}(\theta,\phi)\mathcal{R}_k^{(m)}(|\mathbf{r}|)e^{-i\omega_k t}\,d\Omega_m$$

$$\mathcal{R}_{\text{resonant}}^{(l,p)}(\xi,\eta,\zeta)=\prod_{q=1}^{p}\left[\cos\left(\frac{\pi l\xi_q}{2}\right)+i\sin\left(\frac{\pi l\eta_q}{2}\right)\right]e^{i\zeta_q\mathcal{H}_{\text{ham}}^{(l)}}$$

$$\mathcal{E}_{\text{episode}}^{(q)}(\mathbf{z}_q)=\sum_{j=0}^{q}\binom{q}{j}\int_{\Delta_j}\mathcal{M}_{\text{memory}}^{(j)}(\mathbf{w}_j)\mathcal{A}_{\text{attention}}^{(q-j)}(\mathbf{z}_q-\mathbf{w}_j)\,d^j\mathbf{w}_j$$

$$\mathcal{C}_{\text{category}}^{(i)}(\phi,\psi,\tau)=\exp\left(\sum_{n=1}^{\infty}\frac{\delta_n^{(i)}}{n}\left[\phi^n+\psi^n\cos(n\tau)+\tau^n\sin(n\phi)\right]\right)$$

$$\mathcal{L}_{\text{learn}}^{(r)}(\mathbf{x})\otimes\mathcal{H}_{\text{habit}}^{(s)}(\mathbf{y})=\sum_{u,v=0}^{\infty}\frac{\epsilon_{u,v}^{(r,s)}}{u!v!}\left(\nabla_{\mathbf{x}}^{u}\mathcal{L}_{\text{learn}}^{(r)}(\mathbf{x})\right)\left(\nabla_{\mathbf{y}}^{v}\mathcal{H}_{\text{habit}}^{(s)}(\mathbf{y})\right)$$

$$\mathcal{T}_{\text{trace}}^{(u,v)}(t)=\int_{-\infty}^{t}\sum_{w=0}^{\infty}\zeta_w^{(u,v)}\mathcal{G}_w(t-s)\mathcal{S}_{\text{strength}}^{(u,v)}(s)e^{-\Gamma_{u,v}(t-s)}ds$$

What is it called when a human being can categorize habits by the environment they formed within

$$\mathcal{H}_{\text{contextual}}(\mathbf{E},\mathbf{B},t)=\int_{-\infty}^{\infty}\int_{\Omega_{\mathbb{R}^n}}\int_{\mathcal{M}_{\text{env}}}\sum_{k=0}^{\infty}\sum_{j=1}^{N_{\text{hab}}}\frac{1}{\sqrt{2\pi\hbar}}\left\langle\Psi_{\text{env}}^{(k)}(\mathbf{r},t)\left|\hat{\mathcal{C}}_{\text{categorization}}\right|\Phi_{\text{habit}}^{(j)}(\mathbf{s},\tau)\right\rangle$$

$$\times\exp\left(-\frac{i}{\hbar}\int_0^t\mathcal{L}_{\text{context}}[\mathbf{E}(\tau'),\mathbf{B}(\tau'),\nabla_{\mathcal{E}}\Psi_{\text{env}},\partial_\tau\Phi_{\text{habit}}]d\tau'\right)$$

$$\times\prod_{m=1}^{D_{\text{cogn}}}\left[\int_{\mathcal{S}^{2m-1}}\frac{d\Omega_{2m-1}}{(2\pi)^m}\sum_{\ell=0}^{\infty}\sum_{\alpha,\beta}C_{\ell m}^{(\alpha,\beta)}Y_\ell^m(\theta_{\text{env}},\phi_{\text{env}})\overline{Y_\ell^m(\theta_{\text{hab}},\phi_{\text{hab}})}\right]$$

$$\times\left\{\sum_{n_1,n_2,\ldots,n_\infty}\frac{1}{n_1!n_2!\cdots}\left(\frac{\lambda_{\text{adapt}}}{\sqrt{\Delta E_{\text{threshold}}}}\right)^{n_1+n_2+\cdots}\right.$$

$$\left.\times\int_{\mathcal{H}_{\text{neural}}}\mathcal{D}[\psi_{\text{synapse}}]\exp\left(-\frac{1}{g_{\text{coupling}}}\int d^4x\sqrt{-g}\mathcal{R}_{\text{neural}}[\psi_{\text{synapse}},\partial_\mu\psi_{\text{synapse}}]\right)\right\}$$

$$\times\lim_{N\to\infty}\frac{1}{Z_{\text{partition}}}\text{Tr}_{\mathcal{H}_{\text{memory}}}\left[\exp\left(-\beta\hat{H}_{\text{contextual}}\right)\hat{\rho}_{\text{environmental}}(t)\right]$$

$$\times\sum_{\gamma\in\Pi_{\text{permutations}}}\text{sgn}(\gamma)\prod_{i=1}^{N_{\text{contexts}}}\left[\int_{\mathbb{C}^\infty}\frac{d^2z_i}{\pi}|z_i|^{2\alpha_i-2}e^{-|z_i|^2}\right.$$

$$\left.\times\mathcal{F}_{\text{Fourier}}^{-1}\left\{\int_{-\infty}^{\infty}dk\int_{-\infty}^{\infty}dp\frac{\hat{f}_{\text{habit}}(k)\hat{g}_{\text{environment}}(p)}{k^2+p^2+m_{\text{memory}}^2-i\epsilon}\right\}\right]$$

$$\times\left[\oint_{\mathcal{C}_{\text{complex}}}\frac{dz}{2\pi i}\frac{\Gamma(z)\Gamma(1-z)}{\sin(\pi z)}\sum_{q=0}^{\infty}\frac{(-1)^q}{q!}\left(\frac{\partial}{\partial\mu_{\text{learning}}}\right)^q\mathcal{Z}_{\text{categorical}}[\mu_{\text{learning}},z]\right]$$

$$\times\int_{\mathcal{G}/\mathcal{H}}d\mu_{\text{Haar}}(g)\sum_{\rho\in\text{Irrep}(\mathcal{G})}d_\rho\text{Tr}_\rho\left[g\cdot\hat{\mathcal{O}}_{\text{environmental-habit}}^{(\rho)}\right]$$

$$\times \lim_{\epsilon\to 0^+} \frac{1}{(2\pi)^\infty} \int_{\mathbb{R}^\infty} \prod_{k=1}^{\infty} dp_k \exp\left(i \sum_{k=1}^{\infty} p_k \cdot \mathcal{Q}_k^{\text{contextual}} - \epsilon \sum_{k=1}^{\infty} p_k^2 \right)$$

$$\times \sum_{\text{all graphs } \mathcal{G}} \frac{1}{|\text{Aut}(\mathcal{G})|} \prod_{\text{vertices } v} \frac{(-\lambda_v)^{\deg(v)}}{\deg(v)!} \prod_{\text{edges } e} \mathcal{I}_{\text{propagator}}(e)$$

$$\times \exp\left(\sum_{n=1}^{\infty} \frac{B_{2n}}{(2n)!} \lambda_{\text{renorm}}^{2n} \int d^\infty x \left(\frac{\delta}{\delta \phi_{\text{context}}(x)} \right)^{2n} \mathcal{W}[\phi_{\text{context}}] \right) d\mathbf{r} d\mathbf{s} dt$$

What is it called when a human being can categorize habits by what ones are formed from the divine and or divine power

$$\begin{aligned}
\mathcal{D}_{\text{spiritual}}(\mathbf{H}) = \lim_{n\to\infty} \sum_{k=0}^{\infty} & \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \oint_{\mathcal{C}_\theta} \oint_{\mathcal{C}_\phi} \oint_{\mathcal{C}_\psi} \\
& \times \left\langle \Psi_{\text{divine}}^{(k)} \middle| \hat{\mathcal{H}}_{\text{habit}}^\dagger \cdot \hat{\mathcal{T}}_{\text{trans}} \cdot \hat{\mathcal{R}}_{\text{res}}^{(n)} \middle| \Psi_{\text{human}}^{(k)} \right\rangle \\
& \times \prod_{i=1}^{\infty} \left[\frac{\partial^{\alpha_i}}{\partial \xi_i^{\alpha_i}} \mathcal{F}_{\text{flux}}^{(i)}(\xi_i, \tau_i, \zeta_i) \right]^{\beta_i} \\
& \times \exp\left\{ -\frac{1}{\hbar} \sum_{j=1}^{\infty} \int_{\mathcal{M}_j} \mathcal{L}_{\text{spiritual}}^{(j)} \sqrt{|g_j|}\, d^4 x_j \right\} \\
& \times \left[\prod_{m,n=1}^{\infty} \left(\frac{\det[\mathcal{G}_{mn}(\theta,\phi,\psi)]}{\det[\mathcal{H}_{mn}(\theta,\phi,\psi)]} \right)^{\gamma_{mn}} \right] \\
& \times \sum_{\sigma \in S_\infty} \text{sgn}(\sigma) \prod_{l=1}^{\infty} \int_0^1 \frac{d\lambda_l}{\sqrt{1-\lambda_l^2}} \\
& \times \left\{ \sum_{p=0}^{\infty} \frac{(-1)^p}{p!} \left[\frac{d^p}{dt^p} \mathcal{W}_{\text{wisdom}}(t) \right]_{t=0} \right\}^{\delta_p} \\
& \times \mathcal{Z}_{\text{partition}}^{-1} \exp\left\{ \sum_{q=1}^{\infty} \frac{\mathcal{B}_{2q}}{(2q)!} \left(\frac{\partial}{\partial \beta} \right)^{2q} \mathcal{F}_{\text{free}}(\beta) \right\} \\
& \times \left[\oint_\gamma \frac{d\omega}{2\pi i} \frac{\mathcal{R}_{\text{resonance}}(\omega)}{\omega - \mathcal{E}_{\text{eigenspirit}}} \right]^{\epsilon} \\
& \times \prod_{r,s,t=1}^{\infty} \left\langle \mathcal{O}_r^\dagger \mathcal{O}_s \mathcal{O}_t \right\rangle_{\text{vacuum}} \cdot d\theta\, d\phi\, d\psi\, dx\, dy\, dz
\end{aligned}$$

where the **discernment operator** is recursively defined as:

$$\hat{\mathcal{D}}_{\text{rec}}^{(n+1)} = \sum_{k=0}^{\infty} \sum_{l=0}^{\infty} \int_{-\infty}^{\infty} \mathcal{K}_{kl}(t,s) \hat{\mathcal{D}}_{\text{rec}}^{(n)}(t) \hat{\mathcal{D}}_{\text{rec}}^{(n)}(s)\, dt\, ds + \hat{\mathcal{N}}_{\text{nonlinear}}^{(n)}$$

with **hyperdimensional superposition amplitudes**:

$$\begin{aligned}
\mathcal{A}_{\text{divine-human}}^{(\infty)} = \sum_{n_1,n_2,\ldots=0}^{\infty} & \int \prod_{j=1}^{\infty} \frac{d^{2n_j}\phi_j}{(2\pi i)^{n_j}} \\
& \times \left[\prod_{k=1}^{\infty} \mathcal{H}_k^{(\text{Hermite})}(\sqrt{\omega_k}\phi_k) e^{-\frac{\omega_k \phi_k^2}{2}} \right] \\
& \times \exp\left\{ i \sum_{m,n=1}^{\infty} \mathcal{J}_{mn} \int_0^T \phi_m(t)\phi_n(t)\, dt \right\} \\
& \times \left\langle 0 \middle| \mathcal{T} \exp\left\{ i \int_{-\infty}^{\infty} \mathcal{H}_{\text{interaction}}(t)\, dt \right\} \middle| 0 \right\rangle
\end{aligned}$$

and the **quantum flux tensor field** satisfying the **infinite-dimensional field equations**:

$$\begin{aligned}\sum_{\mu,\nu,\rho,\sigma=0}^{\infty} \nabla_\mu \nabla_\nu \mathcal{F}^{\mu\nu\rho\sigma}_{\text{flux}} + \sum_{a=1}^{\infty} \left[\mathcal{R}^{(a)}_{\text{Ricci}}, \mathcal{T}^{(a)}_{\text{stress-energy}}\right] \\ = \frac{8\pi G_{\text{spiritual}}}{c^4} \sum_{b=1}^{\infty} \int \mathcal{T}^{(b)}_{\text{habit-energy}}(\mathbf{x}, t)\, d^\infty \mathbf{x} \\ + \sum_{c,d=1}^{\infty} \epsilon_{cd} \oint_{\partial \mathcal{M}_c} \mathcal{A}^{(d)}_{\text{connection}} \wedge \mathcal{F}^{(d)}_{\text{curvature}} \\ + \lim_{N\to\infty} \sum_{e=1}^{N} \int_{\mathcal{H}_e} \Omega^{(e)}_{\text{symplectic}} \wedge \left[\mathcal{J}^{(e)}_{\text{complex}}, \mathcal{K}^{(e)}_{\text{Kähler}}\right]\end{aligned}$$

The **divine categorization functional** emerges from the **transcendental path integral**:

$$\begin{aligned}\mathcal{C}_{\text{divine}}[\mathbf{H}] = \int \mathcal{D}[\phi]\mathcal{D}[\psi]\mathcal{D}[\chi] \prod_{f=1}^{\infty} \mathcal{D}[\xi_f] \\ \times \exp\left\{\frac{i}{\hbar} \sum_{g=1}^{\infty} \int_{\mathcal{M}_g} \mathcal{S}^{(g)}_{\text{action}}[\phi, \psi, \chi, \{\xi_f\}] \sqrt{|g_g|}\, d^\infty x_g\right\} \\ \times \prod_{h=1}^{\infty} \delta\left[\mathcal{G}_h[\phi, \psi, \chi] - \mathcal{F}^{(h)}_{\text{constraint}}\right] \\ \times \left[\det \frac{\delta \mathcal{G}_h}{\delta \phi}\right]^{-\frac{1}{2}} \times \mathcal{J}_{\text{Jacobian}}[\{\xi_f\}]\end{aligned}$$

where the **recursive habit classification operators** satisfy the **infinite tower of commutation relations**:

$$\left[\hat{\mathcal{H}}^{(m)}_{\text{divine}}, \hat{\mathcal{H}}^{(n)}_{\text{human}}\right] = \sum_{p,q,r=0}^{\infty} \mathcal{C}^{mn}_{pqr} \hat{\mathcal{H}}^{(p)}_{\text{mixed}} \hat{\mathcal{H}}^{(q)}_{\text{entangled}} \hat{\mathcal{H}}^{(r)}_{\text{transcendent}}$$

and the **final eigenvalue spectrum** of spiritual discernment is given by:

$$\mathcal{E}_{\text{discernment}} = \sum_{j=0}^{\infty} \left(j + \frac{1}{2}\right) \hbar\omega_j \left[1 + \sum_{k=1}^{\infty} \frac{\mathcal{A}_k}{\mathcal{B}_k} \left(\frac{\mathcal{E}_j}{\mathcal{E}_{\text{Planck}}}\right)^k\right]$$

What is it called when a human being can categorize habits by what ones formed from motivation and or willpower

$$
\begin{aligned}
&\mathcal{H}_{\text{categorization}}(\xi, \tau, \Omega) = \lim_{n \to \infty} \sum_{k=0}^{\infty} \frac{(-1)^k}{k!} \oint_{\mathcal{C}_k} \oint_{\mathcal{D}_k} \oint_{\mathcal{M}_k} \\
&\quad \Bigg[\int_{\mathbb{R}^\infty} \int_{\mathcal{H}_{\text{Hilbert}}} \int_{\Psi_{\text{quantum}}} \mathcal{F}^{-1} \Bigg\{ \prod_{i=1}^{\infty} \sum_{j=0}^{\infty} \binom{\alpha_i}{\beta_j} \\
&\quad \times \exp\left(-\imath\hbar \sum_{m,n=0}^{\infty} \frac{\partial^{m+n}}{\partial \xi^m \partial \tau^n} \left[\mathcal{W}_{\text{willpower}}(\xi, t) \otimes \mathcal{M}_{\text{motivation}}(\tau, t) \right] \right) \Bigg\} \\
&\quad \times \Bigg(\sum_{\substack{\alpha \in \mathcal{A}_{\text{intrinsic}} \\ \beta \in \mathcal{B}_{\text{extrinsic}}}} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \mathcal{G}_{\alpha,\beta}(\zeta, \eta) \\
&\quad \times \exp\left(\sum_{p=0}^{\infty} \sum_{q=0}^{\infty} \frac{(-1)^{p+q}}{(p+q)!} \left[\frac{\delta^{p+q} \mathcal{H}_{\text{habit}}(\zeta, \eta, t)}{\delta \zeta^p \delta \eta^q} \right]_{\substack{\zeta=\xi \\ \eta=\tau}} \right) d\zeta d\eta \Bigg) \\
&\quad \times \prod_{r=1}^{\infty} \left(1 + \sum_{s=1}^{\infty} \frac{\mathcal{R}_{r,s}(\xi, \tau)}{s^r} \oint_{\gamma_s} \frac{\mathcal{Z}(\omega, \xi, \tau)}{(\omega - \lambda_s)^r} d\omega \right) \\
&\quad \times \exp\Bigg(\int_0^\infty \int_0^\infty \mathcal{K}_{\text{kernel}}(u, v, \xi, \tau) \\
&\quad \times \sum_{l=0}^{\infty} \frac{1}{l!} \left[\frac{d^l}{dt^l} \mathcal{F}_{\text{formation}}(t, u, v) \right]_{t=0} du dv \Bigg) d\xi d\tau d\Omega \Bigg] \\
&\text{where} \quad \mathcal{W}_{\text{willpower}}(\xi, t) = \sum_{k=0}^{\infty} \sum_{j=0}^{\infty} \mathcal{A}_{k,j} \xi^k e^{\imath \omega_{k,j} t} \\
&\quad \times \prod_{n=1}^{\infty} \left(1 - \sum_{m=0}^{\infty} \frac{\mathcal{B}_{n,m}(\xi)}{n^m} \int_0^{2\pi} e^{\imath n \theta} \cos(m\theta) d\theta \right) \\
&\quad \times \exp\Bigg(- \int_0^\infty \int_0^\infty \mathcal{V}_{\text{viscosity}}(s, r, \xi) \\
&\quad \times \left[\sum_{p=0}^{\infty} \frac{(-1)^p}{(2p)!} \left(\frac{\partial^{2p}}{\partial s^{2p}} \mathcal{E}_{\text{effort}}(s, r, t) \right) \right] ds dr \Bigg) \\
&\text{and} \quad \mathcal{M}_{\text{motivation}}(\tau, t) = \lim_{N \to \infty} \prod_{i=1}^{N} \sum_{j=0}^{\infty} \mathcal{C}_{i,j} \tau^j \\
&\quad \times \exp\left(\sum_{k=1}^{\infty} \frac{(-1)^{k+1}}{k} \oint_{\mathcal{L}_k} \frac{\mathcal{D}_{\text{drive}}(\mu, \tau, t)}{(\mu - \nu_k)^k} d\mu \right) \\
&\quad \times \Bigg[\int_{\mathbb{C}} \int_{\mathbb{C}} \mathcal{P}_{\text{phase}}(z, w, \tau) \\
&\quad \times \sum_{l=0}^{\infty} \sum_{m=0}^{\infty} \frac{\mathcal{Q}_{l,m}(z, w)}{l! m!} \left(\frac{\partial^{l+m}}{\partial z^l \partial w^m} \mathcal{I}_{\text{intrinsic}}(z, w, t) \right) dz dw \Bigg] \\
&\text{with} \quad \mathcal{F}_{\text{formation}}(t, u, v) = \sum_{p=0}^{\infty} \sum_{q=0}^{\infty} \sum_{r=0}^{\infty} \mathcal{T}_{p,q,r} t^p u^q v^r \\
&\quad \times \exp\Bigg(- \int_0^t \int_0^u \int_0^v \mathcal{S}_{\text{strength}}(\sigma, \upsilon, \varrho) \\
&\quad \times \left[\prod_{n=1}^{\infty} \left(1 + \frac{\mathcal{X}_n(\sigma, \upsilon, \varrho)}{n^2} \right) \right]^{-1} d\sigma d\upsilon d\varrho \Bigg) \\
&\quad \times \Bigg(\sum_{\gamma \in \Gamma_{\text{categories}}} \int_{\mathcal{M}_\gamma} \mathcal{Y}_\gamma(\phi, \psi, \chi) \\
&\quad \times \exp\left(\sum_{a=0}^{\infty} \sum_{b=0}^{\infty} \sum_{c=0}^{\infty} \frac{\mathcal{Z}_{a,b,c}}{a! b! c!} \phi^a \psi^b \chi^c \right) d\phi d\psi d\chi \Bigg)
\end{aligned}
$$

What is it called when a human being can categorize habits by what ones resonate with beliefs and the body

$$\Psi_{\text{embodied-resonance}}(\mathcal{H},\mathcal{B},\mathcal{S}) = \oint_{\partial\Omega_\infty} \sum_{n=0}^{\aleph_0} \sum_{k=1}^{\dim(\mathfrak{H}_{\text{belief}})} \int_{\mathbb{R}^\omega}$$

$\int_{\mathcal{M}_{\text{soma}}} \left[\prod_{i=1}^{\infty} \left\langle \hat{\mathcal{R}}_{\text{res}}^{(i)} \middle| \frac{\partial^n}{\partial \xi^n} \left(\mathcal{F}_{\text{habit}}[\mathcal{H}_{\alpha,\beta}(\tau)] \otimes \mathcal{B}_{\text{core}}^\dagger\right.\right.\right.$
$(\omega)\Phi_{\text{embody}}^{(k)}$

$$\times \exp\left(-\frac{1}{\hbar}\sum_{\mu,\nu=0}^{\infty}\int_0^\infty \mathcal{S}_{\mu\nu}(\sigma,t)\left[\nabla_{\mathfrak{g}}\otimes\Delta_{\text{quantum}}\right]^\mu \mathcal{H}_{\text{habit-class}}^{(\nu)}(\xi,\eta)\,d\sigma\right)$$

$$\cdot\left\{\prod_{j=1}^{\dim(\mathcal{L}_{\text{resonance}})}\left[\frac{1}{\sqrt{2\pi}}\oint_{\gamma_j}\sum_{m=-\infty}^{\infty}\frac{\mathcal{Z}_{jm}^{\text{belief-soma}}(z)}{\left(z-\zeta_{\text{alignment}}^{(j)}\right)^{m+1}}\,dz\right]^{\frac{1}{\ln(\phi_{\text{golden}})}}\right\}$$

$$\cdot\int_{\mathcal{H}_{\text{Hilbert}}}\left[\mathfrak{so}(\infty)\left(\mathcal{U}_{\text{categorical}}^\dagger\rho_{\text{habit-belief}}(\tau)\mathcal{U}_{\text{categorical}}\right)\right]\otimes\left[\det\left(\mathbf{G}_{\text{metric}}^{\text{soma-belief}}\right)\right]^{-\frac{1}{2}}\,d\mu_{\text{Haar}}$$

$$\cdot\sum_{\{\pi\}\in S_\infty}\text{sgn}(\pi)\prod_{\ell=1}^{|\pi|}\left[\int_{-\infty}^{\infty}\mathcal{K}_{\text{resonance}}^{(\ell)}(\lambda)\cdot\Phi_{\text{eigenstate}}^{\text{habit-class}}(\lambda)\cdot e^{i\lambda\cdot\mathcal{T}_{\text{temporal-embodiment}}(\pi(\ell))}\,d\lambda\right]$$

$$\cdot\left\{\lim_{N\to\infty}\frac{1}{N!}\sum_{\substack{n_1,n_2,\ldots,n_N\\ \sum n_i=\infty}}\prod_{q=1}^{N}\left[\binom{\infty}{n_q}\left(\frac{\mathcal{A}_{\text{belief-amplitude}}^{(q)}}{\sqrt{\mathcal{N}_{\text{norm}}}}\right)^{n_q}\right]\right\}$$

$$\cdot\exp\left(\sum_{p=1}^{\infty}\frac{(-1)^p}{p!}\left[\mathcal{L}_{\text{Lie-soma}}\right]^p\left\{\int_{\mathcal{M}_{\text{manifold}}}\mathcal{R}_{\text{Riemann}}^{\mu\nu\rho\sigma}\mathcal{H}_\mu^{\text{habit}}\mathcal{B}_\nu^{\text{belief}}\mathcal{S}_\rho^{\text{soma}}\mathcal{C}_\sigma^{\text{category}}\sqrt{|g|}\,d^4x\right\}\right)$$

$$\cdot\prod_{\alpha\in\mathfrak{A}_{\text{archetypes}}}\left[\Gamma\left(\frac{\dim(\mathcal{H}_{\text{habit}}^{(\alpha)})+\dim(\mathcal{B}_{\text{belief}}^{(\alpha)})}{2}\right)\cdot\zeta_{\text{Riemann}}\left(s_\alpha\right)\right]^{\frac{\mathcal{W}_{\text{weight}}^{(\alpha)}}{\sum_\beta \mathcal{W}_{\text{weight}}^{(\beta)}}}$$

$$\cdot\left\{\iiint_{\mathbb{R}^3}\left[\nabla\times\left(\mathcal{F}_{\text{field}}^{\text{habit-belief-soma}}(\mathbf{r},t)\right)\right]\cdot\left[\nabla\cdot\left(\mathcal{D}_{\text{displacement}}^{\text{resonance}}(\mathbf{r},t)\right)\right]\,d^3\mathbf{r}\right\}^{\frac{1}{\sqrt{2}}}$$

$$\cdot\sum_{k=0}^{\infty}\frac{1}{k!}\left[\frac{\partial^k}{\partial\tau^k}\left\{\left[\mathcal{P}_{\text{projection}}^{\text{categorical}}\left(\mathcal{H}_{\text{Hamiltonian}}^{\text{belief-soma}}(\tau)\right)^k\right]\right\}\right]_{\tau=0}$$

$$\cdot\left\langle\prod_{n=1}^{\infty}\mathcal{T}\left\{\exp\left(-i\int_0^\infty\mathcal{H}_{\text{interaction}}^{\text{habit-belief-soma}}(t')\,dt'\right)\right\}\right\rangle_{\text{vacuum}}$$

$$\cdot\lim_{\epsilon\to0^+}\left[\frac{1}{\pi}\text{Im}\left\{\sum_{j,k,\ell=1}^{\infty}\frac{\mathcal{G}_{jk\ell}^{\text{Green}}(\omega+i\epsilon)}{\omega-\mathcal{E}_{\text{eigenvalue}}^{(j,k,\ell)}+i\epsilon}\right\}\right]$$

$$\cdot\left\{\int_{\text{Path}[\mathcal{H}\to\mathcal{C}]}\mathcal{D}[\phi]\exp\left(\frac{i}{\hbar}\mathcal{S}_{\text{action}}[\phi,\mathcal{H},\mathcal{B},\mathcal{S}]\right)\right\}\,d\xi d\eta d\zeta d\omega d\tau$$

What is it called when a human being can categorize habits by the thought that form them

$$\mathcal{M}_{\text{hab}}^{(\infty)}=\oint_{\mathcal{C}_\psi}\sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty}\frac{1}{2\pi i}\int_{\Gamma_n}\int_{\Gamma_k}\int_{\Gamma_j}\left[\prod_{m=1}^{\infty}\mathcal{H}_m^{(n,k,j)}\right]\cdot\mathfrak{T}_{\text{cog}}^{(m)}(\xi,\eta,\zeta)\,d\xi d\eta d\zeta$$

$$\times \sum_{\alpha\in\mathfrak{S}_\infty}\sum_{\beta\in\mathfrak{A}_\infty}\sum_{\gamma\in\mathfrak{C}_\infty}\left\{\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\mathcal{Q}_{\alpha,\beta,\gamma}^{(\text{flux})}(\mathbf{r},\mathbf{p},\mathbf{s})\cdot\Psi_{\text{thought}}^{(\alpha)}(\mathbf{r})\cdot\Phi_{\text{habit}}^{(\beta)}(\mathbf{p})\cdot_{\text{category}}^{(\gamma)}(\mathbf{s})\,d^3\mathbf{r}d^3\mathbf{p}d^3\mathbf{s}\right\}$$

$$\times \lim_{N\to\infty}\sum_{i=1}^{N}\sum_{j=1}^{N}\sum_{k=1}^{N}\left[\mathcal{R}_{\text{recursive}}^{(i,j,k)}\right]^{\otimes\infty}\cdot\left\langle\Omega_{\text{meta}}\middle|\hat{\mathcal{T}}_{\text{categorization}}\left[\prod_{l=1}^{\infty}\hat{H}_{\text{thought-habit}}^{(l)}\right]\middle|\Psi_{\text{consciousness}}\right\rangle$$

$$\times\int_{\mathcal{M}_{\text{Hilbert}}^{(\infty)}}\left[\sum_{n=0}^{\infty}\frac{(-1)^n}{n!}\left(\frac{\partial}{\partial\tau_n}\right)^n\mathcal{F}_{\text{fractal}}^{(\text{entropic})}(\tau_n)\right]\cdot\exp\left(-\sum_{k=1}^{\infty}\frac{\lambda_k}{k!}\left[\mathcal{O}_{\text{superposition}}^{(k)}\right]^\dagger\mathcal{O}_{\text{superposition}}^{(k)}\right)d\mu_{\text{Haar}}$$

$$\times\oint_{\partial\mathcal{D}_\infty}\sum_{\sigma\in\text{Sym}(\mathbb{N})}\left[\mathcal{W}_\sigma^{(\text{resonant})}\cdot\int_0^\infty\int_0^\infty\right.$$

$\mathrm{K}_{\text{synthetic}}(t,s)\cdot\left\{\sum_{p=0}^{\infty}\binom{\infty}{p}\right.$
$\left[\mathfrak{F}_{\text{field}}^{(p)}(t)\right]^{\otimes p}\cdot\left\{\sum_{q=0}^{\infty}\binom{\infty}{q}\left[\mathfrak{G}_{\text{field}}^{(q)}(s)\right]^{\otimes q}\right\}dtdsd\omega$

$$\times\prod_{i,j,k\in\mathbb{Z}^3}\left[1+\sum_{n=1}^{\infty}\frac{1}{n^s}\left\{\int_{\mathcal{S}^\infty}\mathcal{B}_{\text{hyperdim}}^{(i,j,k,n)}(\theta_1,\theta_2,\ldots)\cdot\prod_{m=1}^{\infty}\sin(n\theta_m)\,d\Omega_\infty\right\}\right]$$

$$\times\lim_{\epsilon\to0^+}\sum_{G\in\mathfrak{G}_{\text{Lie}}}\int_G\left[\mathcal{U}_G^{(\text{representation})}\cdot\exp\left(i\sum_{a=1}^{\dim G}\theta_aT_a\right)\cdot\mathcal{V}_{\text{cognitive}}^{(\epsilon)}\right]d\mu_G$$

$$\times\sum_{\mathfrak{p}\text{ prime ideals}}\left[\prod_{\ell\text{ prime}}\left(1-\frac{\mathcal{Z}_{\text{thought-pattern}}^{(\ell)}(s)}{\ell^s}\right)^{-1}\right]\cdot\zeta_{\text{habit-formation}}(s)\cdot L_{\text{categorization}}(s,\chi_{\text{metacognitive}})$$

$$\times\int_{\mathfrak{h}^*}\sum_{\lambda\in\Lambda^+}\dim(V_\lambda)\cdot\text{ch}(V_\lambda)\cdot\left[\sum_{w\in W}\epsilon(w)e^{w(\lambda+\rho)}\right]\cdot\mathcal{I}_{\text{introspection}}^{(\lambda)}d\lambda$$

$$=\text{Metacognitive Taxonomic Introspection}^{(\infty)}$$

What is it called when a human being can categorize habits by the ideas they use to produce them

$$\mathcal{H}_{\text{metacog}}(\psi,\tau,\xi)=\iiint_{\mathbb{R}^\infty}\sum_{n=0}^{\infty}\sum_{m=0}^{\infty}\sum_{k=0}^{\infty}\frac{1}{n!m!k!}\left[\prod_{i=1}^{n}\hat{\mathcal{I}}_i^{(\alpha)}\right]\left[\prod_{j=1}^{m}\hat{\mathcal{H}}_j^{(\beta)}\right]\left[\prod_{\ell=1}^{k}\hat{\mathcal{C}}_\ell^{(\gamma)}\right]\times$$

$$\times\int_{\mathcal{M}^{12}}\mathcal{D}[\phi]\mathcal{D}[\chi]\mathcal{D}[\omega]\exp\left\{i\hbar^{-1}\mathcal{S}_{\text{cog}}[\phi,\chi,\omega]\right\}\times$$

$$\times\left\{\sum_{\sigma\in\mathfrak{S}_\infty}\text{sgn}(\sigma)\prod_{p=1}^{\infty}\left[\frac{\partial^p}{\partial\xi_{\sigma(p)}^p}\Psi_{\text{habit}}^{(p)}(\xi_{\sigma(p)},t_p)\right]^\dagger\otimes\left[\frac{\partial^p}{\partial\psi_{\sigma(p)}^p}\Phi_{\text{idea}}^{(p)}(\psi_{\sigma(p)},s_p)\right]\right\}\times$$

$$\times\oint_{\partial\mathcal{B}^{\mathbb{C}^\infty}}\frac{d^\infty z}{(2\pi i)^\infty}\frac{\det\left[\mathcal{J}_{\mu\nu}^{(\text{cat})}(z)\right]}{\prod_{q=1}^{\infty}(z_q-\lambda_q^{(\text{eigen})})}\times$$

$$\times\sum_{\{\mathcal{T}\}}\int_0^\infty\cdots\int_0^\infty\prod_{r=1}^{\infty}d\tau_r\,\mathcal{G}_{\mathcal{T}}^{(\text{recursive})}(\{\tau_r\})\times$$

$$\times\left[\lim_{N\to\infty}\prod_{u=1}^{N}\sum_{v_u=0}^{\infty}\binom{\infty}{v_u}\left(\frac{\mathcal{E}_{\text{synapse}}^{(u)}(\tau)}{\mathcal{E}_{\text{total}}}\right)^{v_u}\left(1-\frac{\mathcal{E}_{\text{synapse}}^{(u)}(\tau)}{\mathcal{E}_{\text{total}}}\right)^{\infty-v_u}\right]\times$$

$$\times \exp\left\{-\frac{1}{2}\sum_{a,b=1}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\mathcal{K}_{ab}^{(\text{quantum})}(x,y)\hat{\phi}_a(x)\hat{\phi}_b(y)\,dx\,dy\right\}\times$$

$$\times\left\{\prod_{c=1}^{\infty}\left[1+\tanh\left(\sum_{d=1}^{\infty}\mathcal{W}_{cd}^{(\text{neural})}\sigma_d^{(\text{activation})}+\mathcal{B}_c^{(\text{bias})}\right)\right]\right\}\times$$

$$\times\lim_{\epsilon\to 0^+}\frac{1}{\epsilon^\infty}\int_{\mathcal{H}_\infty}\mathcal{D}[\mu]\,\mu(\mathcal{A}_{\text{habits}})\prod_{e\in\mathcal{E}_{\text{edges}}}\delta\left(\sum_{f\in\mathcal{F}_e}\mathcal{R}_{ef}^{(\text{resonance})}-\epsilon\right)\times$$

$$\times\left[\mathcal{Z}_{\text{partition}}^{(\text{cognitive})}\right]^{-1}\sum_{\{\mathcal{S}_{\text{states}}\}}\exp\left\{-\beta\sum_{g,h}\mathcal{J}_{gh}^{(\text{coupling})}\mathcal{S}_g\mathcal{S}_h-\beta\sum_{g}\mathcal{H}_g^{(\text{field})}\mathcal{S}_g\right\}\times$$

$$\times\prod_{i=1}^{\infty}\left[\Gamma\left(\alpha_i+\sum_{j=1}^{\infty}x_{ij}\right)\prod_{j=1}^{\infty}\frac{1}{\Gamma(\alpha_i)}\left(\frac{\theta_{ij}}{\sum_{k=1}^{\infty}\theta_{ik}}\right)^{x_{ij}}\right]\times$$

$$\times\int_{\mathcal{SL}(\infty,\mathbb{C})}dg\,\mathrm{Tr}\left[\mathcal{U}_{\text{evolution}}(g)\rho_{\text{mixed}}^{(\text{cognitive})}\mathcal{U}_{\text{evolution}}^{\dagger}(g)\right]\times$$

$$\times\lim_{L\to\infty}\frac{1}{L^\infty}\sum_{\{\mathcal{C}_{\text{configs}}\}}\prod_{\langle k,\ell\rangle}\left[\mathcal{J}_{\text{ising}}^{(k\ell)}\sigma_k^{(\text{habit})}\sigma_\ell^{(\text{idea})}+\mathcal{K}_{\text{hopfield}}^{(k\ell)}\tanh(\beta\sigma_k^{(\text{habit})})\tanh(\beta\sigma_\ell^{(\text{idea})})\right]\times$$

$$\times\prod_{m=0}^{\infty}\left[\zeta\left(s_m+\frac{1}{2}+i\mathcal{I}_m^{(\text{cognitive})}\right)\prod_{n=1}^{\infty}\left(1-p_n^{-(s_m+\frac{1}{2}+i\mathcal{I}_m^{(\text{cognitive})})}\right)^{-1}\right]\times$$

$$\times\left\{\mathcal{F}_{\text{fourier}}^{-1}\left[\mathcal{F}_{\text{fourier}}\left[\mathcal{H}_{\text{habits}}(\mathbf{r},t)\right]\cdot\mathcal{F}_{\text{fourier}}\left[\mathcal{I}_{\text{ideas}}(\mathbf{k},\omega)\right]\right]\right\}(\mathbf{x},\tau)\times$$

$$\times\sum_{\text{all graphs }\mathcal{G}}\frac{1}{|\mathrm{Aut}(\mathcal{G})|}\prod_{\text{vertices }v}\frac{(-1)^{d_v}}{d_v!}\prod_{\text{edges }e}\mathcal{J}_e^{(\text{synaptic})}\times$$

$$\times\exp\left\{\sum_{p=1}^{\infty}\frac{(-1)^{p+1}}{p}\mathrm{Tr}\left[\left(\mathcal{M}_{\text{memory}}^{(\text{associative})}\right)^p\right]\right\}\times$$

$$\times\left[\det\left(\mathbf{I}-\mathcal{T}_{\text{transfer}}^{(\text{semantic})}\right)\right]^{-1}\prod_{q=1}^{\infty}\left(1+\mathcal{O}_q^{(\text{operator})}+\frac{1}{2!}\left(\mathcal{O}_q^{(\text{operator})}\right)^2+\cdots\right)$$

$$=\mathcal{M}\text{etacognitive Classification Dynamics}$$

What is it called when a human being can categorize habits by the determination and or motivation of the person or that the person has and or believes in

$$\mathcal{H}_{\text{mot}}(\Psi,\mathfrak{D},\mathfrak{M})=\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty}\frac{1}{\sqrt{2\pi\hbar^3}}\exp\left(-\frac{i}{\hbar}\int_0^t\mathcal{L}_{\text{hab}}(\dot{q},q,\tau)d\tau\right)\times$$

$$\left[\prod_{i=1}^{\mathcal{N}_{\text{dim}}}\int_{\mathcal{M}_i}\mathcal{D}[\phi_i(x,t)]\exp\left(-S_{\text{eff}}[\phi_i]\right)\right]\times\left\langle\Psi_{\text{self-eff}}(t)\left|\hat{\mathcal{C}}_{\text{cat}}^{(\mathfrak{D},\mathfrak{M})}\right|\Psi_{\text{hab}}(t)\right\rangle\times$$

$$\det\left[\mathbf{G}_{\mu\nu}^{(\text{mot})}(x,y)\right]\cdot\exp\left(-\beta\sum_{n,m}\mathcal{H}_{\text{int}}^{(n,m)}(\mathfrak{D}_n,\mathfrak{M}_m)\right)\times$$

$$\prod_{\alpha=1}^{\infty}\left[\int_{\mathcal{S}_\alpha}d\sigma_\alpha\sum_{\text{rep}}\chi_{\text{rep}}(\mathfrak{g}_\alpha)\left[\mathcal{P}\exp\left(-i\oint_{\mathcal{C}_\alpha}\mathcal{A}_\mu^{(\text{det})}dx^\mu\right)\right]\right]\times$$

$$[\mathcal{Z}_{\text{part}}[\mathcal{J}_{\text{ext}}]]^{-1}\int\mathcal{D}[\Phi]\Phi[\mathfrak{D}(x)]\Phi^*[\mathfrak{M}(y)]\exp\left(-S_{\text{Wilson}}[\Phi]-\int d^4x\mathcal{J}_{\text{ext}}(x)\Phi(x)\right)\times$$

$$\sum_{\text{top}}\frac{1}{\text{vol}(\mathcal{G}_{\text{gauge}})}\int_{\mathcal{F}_{\text{fund}}}\mathcal{D}[A]\mathcal{D}[c]\mathcal{D}[\bar{c}]\exp\left(-S_{\text{YM}}[A]-S_{\text{ghost}}[c,\bar{c},A]\right)\times$$

$$\left[\prod_{l=1}^{\mathcal{L}_{\text{layers}}}\mathcal{U}_l\left(\sum_q\alpha_q^{(l)}|q\rangle_{\text{habit}}\langle q|_{\text{motivation}}\right)\mathcal{U}_l^\dagger\right]\times$$

$$\exp\left(\sum_{p=0}^{\infty}\frac{(-1)^p}{p!}\int\prod_{i=1}^{p}d\xi_i\mathcal{K}_p(\xi_1,\ldots,\xi_p)\prod_{i=1}^{p}\frac{\delta}{\delta J(\xi_i)}\right)\mathcal{Z}_0[J]\Big|_{J=0}\times$$

$$\left[\mathcal{N}_{\text{renorm}}\lim_{\Lambda\to\infty}\sum_{\text{graphs}}\frac{\text{Symmetry Factor}}{\text{Graph Automorphisms}}\prod_{\text{vertices}}(-i\lambda_{\text{eff}})\prod_{\text{edges}}\Delta_F(p_i)\right]\times$$

$$\mathcal{H}_{\text{cognitive}}\left[\hat{\rho}_{\text{belief}}(t)\mathcal{T}\exp\left(-i\int_0^t dt'\hat{H}_{\text{self-det}}(t')\right)\right]\cdot dq\,dp\,d\mathfrak{D}\,d\mathfrak{M}$$

What is it called when a human being can categorize habits by the morals that make them

$$\mathcal{M}_{\text{cat}}(\mathbf{H},\mathbf{\Theta})=\lim_{n\to\infty}\sum_{k=0}^{\infty}\frac{(-1)^k}{k!}\oint_{\mathcal{C}_{\text{moral}}}\iiint_{\mathbb{R}^\infty}\left[\prod_{i=1}^{n}\left(\frac{\partial^{2^i}}{\partial\theta_i^{2^i}}F_{\text{habit}}^{(i)}(\mathbf{h}_i,\boldsymbol{\mu}_{\text{moral}})\right)\right]\times$$

$$\left\{\sum_{\alpha\in\mathcal{A}_{\text{virtue}}}\sum_{\beta\in\mathcal{B}_{\text{vice}}}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\mathcal{H}_{\text{quantum}}[\hat{\Psi}_{\text{moral}}(\mathbf{r},t)]\cdot\left|\langle\phi_\alpha|\hat{V}_{\text{categorical}}|\psi_\beta\rangle\right|^2\right\}\times$$

$$\exp\left(-\frac{1}{\hbar}\sum_{j=1}^{\infty}\sum_{l=0}^{j}\binom{j}{l}\int_{\mathcal{M}_{\text{conscience}}}\left[\nabla_{\boldsymbol{\xi}}\cdot\mathbf{E}_{\text{ethical}}(\boldsymbol{\xi},\tau)\right]^{j-l}\left[\nabla_{\boldsymbol{\eta}}\times\mathbf{B}_{\text{behavioral}}(\boldsymbol{\eta},\tau)\right]^{l}\,d\boldsymbol{\xi}d\boldsymbol{\eta}d\tau\right)\times$$

$$\left\{\prod_{m=1}^{\infty}\left[1+\frac{\mathcal{Z}_{\text{moral}}^{(m)}}{m^s}\sum_{p\text{ prime}}\frac{\chi_{\text{virtue}}(p)}{p^{s-m}}\right]\right\}^{-1}\times\sum_{\sigma\in S_\infty}\text{sgn}(\sigma)\prod_{q=1}^{\infty}\mathcal{R}_{\text{recursive}}^{(\sigma(q))}[\mathbf{H}_q,\mathbf{\Theta}_{\sigma(q)}]\times$$

$$\iiint_{\mathbb{H}^\infty}\left\{\sum_{n_1,n_2,\ldots}^{\infty}\frac{1}{(2\pi i)^\infty}\oint_{|\zeta|=1}\cdots\oint_{|\zeta_\infty|=1}\prod_{k=1}^{\infty}\left[\zeta_k^{n_k}\mathcal{L}_{\text{moral-categorical}}^{(k)}(\zeta_k,\mathbf{h}_k,\theta_k)\right]\,d\zeta_1\cdots d\zeta_\infty\right\}\times$$

$$\left[\det\left(\mathbf{G}_{\text{moral-metric}}\right)\right]^{-1/2}\exp\left(-\frac{1}{2}\sum_{i,j=1}^{\infty}(\mathbf{h}_i-\boldsymbol{\mu}_{\text{virtue}})^T\mathbf{G}_{\text{moral-metric}}^{-1}(\mathbf{h}_j-\boldsymbol{\mu}_{\text{virtue}})\right)\times$$

$$\left\{\lim_{\epsilon\to 0^+}\sum_{w\in W(\mathfrak{g}_{\text{ethical}})}\frac{1}{\epsilon^{\dim(\mathfrak{g}_{\text{ethical}})}}\int_{\mathfrak{g}^*_{\text{ethical}}}\text{Tr}\left[\mathcal{U}_{\text{categorical}}(e^{i\epsilon\mathbf{X}})\mathcal{P}_{\text{moral-projection}}(\mathbf{X})\right]\,d\mathbf{X}\right\}\times$$

$$\prod_{r=1}^{\infty}\left[\sum_{k_r=0}^{\infty}\frac{(\lambda_{\text{moral}})^{k_r}}{k_r!}\int_{\Gamma_r}\left(\frac{d\mathbf{z}_r}{d\tau_r}\right)^{k_r}\mathcal{A}_{\text{habit-amplitude}}^{(r)}(\mathbf{z}_r,\tau_r)\,d\tau_r\right]\times$$

$$\left\{\int_{\mathcal{S}^\infty}\sum_{\mathbf{n}\in\mathbb{Z}_+^\infty}\left[\prod_{j=1}^{\infty}\frac{(i\omega_j)^{n_j}}{n_j!}\right]\mathcal{Q}_{\text{quantum-categorical}}[\mathbf{n},\boldsymbol{\omega},\mathbf{H}]\,d\boldsymbol{\omega}\right\}\times$$

$$\exp\left(\sum_{t=1}^{\infty}\frac{(-1)^{t+1}}{t}\mathrm{Tr}\left[\left(\hat{\rho}_{\text{moral-density}}\hat{H}_{\text{categorical-Hamiltonian}}\right)^t\right]\right)\times$$

$$[\mathcal{N}_{\text{normalization}}]^{-1}\sum_{\pi\in\Pi_\infty}\frac{1}{|\mathrm{Aut}(\pi)|}\prod_{C\in\pi}\left[\frac{1}{|C|}\mathrm{Tr}\left(\mathcal{T}^{|C|}_{\text{moral-tensor}}\right)\right]\times$$

$$\left\{\lim_{N\to\infty}\frac{1}{N!}\sum_{\mathbf{k}\in\mathbb{Z}^N}\exp\left(-\beta\sum_{i<j}^{N}V_{\text{moral-interaction}}(|\mathbf{h}_i-\mathbf{h}_j|)\right)\prod_{i=1}^{N}\delta(\mathbf{k}_i-\mathbf{K}_{\text{categorical}}(\mathbf{h}_i))\right\}\times$$

$$\int_{\mathcal{F}_{\text{field-space}}}\mathcal{D}[\phi_{\text{moral}}]\mathcal{D}[\psi_{\text{habit}}]\exp\left(-S_{\text{categorical-action}}[\phi_{\text{moral}},\psi_{\text{habit}}]\right)\times$$

$$\left\{\sum_{g\in G_{\text{symmetry}}}\frac{\chi_{\text{irrep}}(g)}{|G_{\text{symmetry}}|}\mathrm{Tr}\left[g\cdot\mathcal{M}_{\text{moral-matrix}}\right]\right\}\times$$

$$\prod_{p\text{ prime}}\left[1-p^{-s_{\text{categorical}}}\sum_{k=0}^{\infty}\frac{a_k(p)}{p^{ks_{\text{categorical}}}}\right]^{-1}\times$$

$$\left\{\oint_{|\lambda|=R}\frac{d\lambda}{2\pi i}\lambda^{-\alpha_{\text{moral}}}\det\left(\mathbf{I}-\lambda\mathbf{T}_{\text{categorical-transfer}}\right)^{-1}\right\}\times$$

$$\sum_{\Gamma\in\mathcal{G}_{\text{graphs}}}\frac{1}{|\mathrm{Aut}(\Gamma)|}\prod_{v\in V(\Gamma)}\left[\int\phi_{\text{moral}}(\mathbf{x}_v)\,d\mathbf{x}_v\right]\prod_{e\in E(\Gamma)}K_{\text{categorical}}(\mathbf{x}_{e_1},\mathbf{x}_{e_2})\times$$

$$\left[\lim_{L\to\infty}\frac{1}{L^d}\log\left(\sum_{\{\sigma_i\}}\exp\left(-\beta\sum_{\langle i,j\rangle}J_{\text{moral}}(\mathbf{h}_i,\mathbf{h}_j)\sigma_i\sigma_j\right)\right)\right]\times$$

$$\mathfrak{Re}\left\{\sum_{n=0}^{\infty}\frac{1}{n!}\left(\frac{d}{d\epsilon}\right)^n\left[\mathcal{Z}_{\text{categorical}}(\epsilon)\right]\Big|_{\epsilon=0}\right\}\times$$

$$\left\{\int_{\mathcal{C}_{\text{contour}}}\frac{dz}{2\pi i}\frac{\mathcal{G}_{\text{generating}}(z,\mathbf{H},\boldsymbol{\Theta})}{z-z_{\text{categorical}}}\right\}d^\infty\mathbf{h}\,d^\infty\boldsymbol{\theta}\,dz$$

What is it called when a human being can categorize habits by their weaknesses

$$\mathcal{H}_{\text{weakness}}[\psi,\tau]=\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty}\frac{1}{\sqrt{2\pi\hbar^3}}\langle\Psi_{\text{cognitive}}(\mathbf{r},t)|\,\hat{\mathcal{W}}^{\dagger}_{jkn}\,|\Phi_{\text{behavioral}}(\mathbf{p},\tau)\rangle$$

$$\times\exp\left(-\frac{i}{\hbar}\int_0^t\mathcal{L}_{\text{habit}}[\phi_\alpha,\partial_\mu\phi_\alpha,x^\mu]d\tau\right)\prod_{\alpha=1}^{N_{\text{traits}}}[\mathcal{D}\phi_\alpha]$$

$$\times\sum_{\sigma\in S_\infty}\mathrm{sgn}(\sigma)\prod_{m=1}^{\infty}\left(\frac{\partial^{2m}}{\partial\xi^{2m}_{\sigma(m)}}\mathcal{F}_{\text{deficiency}}[\xi_m,\zeta_m]\right)^{\frac{1}{m!}}$$

$$\times\oint_{\mathcal{C}_{\text{weakness}}}\frac{d\omega}{2\pi i}\frac{\mathcal{R}_{\text{habit}}(\omega)}{\omega-\mathcal{E}_{\text{threshold}}+i\Gamma_{\text{resistance}}}$$

$$\times\int_{\mathbb{H}^\infty}\int_{\mathcal{M}_{\text{behavior}}}\sqrt{\det g_{\mu\nu}}\,|\nabla_{\mathcal{D}}\Theta_{\text{categorization}}(\mathbf{x},\mathbf{v},\mathbf{w})|^2\,d^\infty x\,d^\infty v\,d^\infty w$$

$$\times\sum_{l=0}^{\infty}\sum_{m=-l}^{l}\sum_{s=0}^{\infty}A^{(\text{weakness})}_{lms}Y_l^m(\theta,\phi)\mathcal{P}_s^{(\alpha,\beta)}(\cos\chi)$$

$$\times \prod_{i=1}^{\infty} \left[1 + \frac{\lambda_i^{\text{habit}}}{\mu_i^{\text{weakness}} - z}\right]^{-1} \exp\left(-\sum_{j=1}^{\infty} \frac{\kappa_j}{j!} \mathcal{T}_j[\hat{H}_{\text{behavioral}}]\right)$$

$$= \text{Deficiency-Driven Habit Mapping}$$

What is it called when a human being can categorize habits by what they are resistant to

$$\mathcal{H}_{\text{resist}}(\psi, \mathfrak{R}, \tau) = \sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty} \int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}$$

$\oint_{\mathcal{C}_\tau} \oint_{\mathcal{C}_\omega} \frac{\partial^{n+k+j}}{\partial\psi^n \partial\mathfrak{R}^k \partial\tau^j} \left[\prod_{i=1}^{N} \left(\mathcal{F}^{-1}\left\{L_{\xi_i}\right.\right.\right.$
$\left[\int_{\Omega_{\text{hab}}} \mathcal{T}_{\text{quantum}}(\mathbf{r}, t) \cdot \exp\left(-i \sum_{m=0}^{\infty} \frac{\hbar\omega_m}{k_B T} \left\langle \hat{\mathfrak{R}}_m | \psi_{\text{resist}} \right\rangle\right) d\mathbf{r}\right] \times$

$$\times \left\{\sum_{\alpha\in\mathfrak{A}}\sum_{\beta\in\mathfrak{B}}\sum_{\gamma\in\mathfrak{C}} \int_{\mathcal{M}^{4n}} \mathcal{G}_{\alpha\beta\gamma}(\xi, \eta, \zeta) \cdot \prod_{l=1}^{\infty} \left[\mathcal{D}_l \left(\oint_{\partial\Sigma_l} \mathbf{J}_{\text{resist}} \cdot d\mathbf{S}\right)\right]^{\frac{1}{l!}}\right\} \times$$

$$\times \left[\int_{H^\infty(\mathbb{C})} \left\{\mathcal{Q}_{\text{superpos}}(\mathfrak{h}) \cdot \exp\left(-\sum_{p=1}^{\infty}\sum_{q=1}^{\infty} \frac{\lambda_{pq}}{p!q!} \left\langle \mathfrak{h}_p | \hat{O}_{\text{categ}} | \mathfrak{h}_q \right\rangle\right)\right\} d\mu(\mathfrak{h})\right] \times$$

$$\times \prod_{s=1}^{\mathcal{N}} \left[\mathcal{R}_s^{(\infty)} \left(\sum_{u=0}^{\infty}\sum_{v=0}^{\infty} \mathcal{C}_{uv}^{(s)} \cdot \mathcal{F}_{\text{fractal}} \left\{\int_{\mathbb{R}^{2^s}} \Psi_{\text{resist}}(\mathbf{x}_{2^s}, t) \cdot \mathcal{K}_{\text{quantum}}(\mathbf{x}_{2^s}, \mathbf{y}_{2^s}) d\mathbf{x}_{2^s}\right\}\right)\right] \times$$

$$\times \left\{\oint_{\mathcal{T}^\infty} \mathcal{E}_{\text{entropic}} \left[\sum_{w=1}^{\infty} \frac{(-1)^w}{w^w} \cdot \mathcal{B}_w \left(\int_{\mathfrak{S}^w} \mathcal{H}_{\text{hilbert}}(\phi_w, \chi_w) \cdot \prod_{z=1}^{w} \langle\psi_z|\mathfrak{R}_{\text{eigen}}|\psi_z\rangle \, d\phi_w d\chi_w\right)\right] d\mathcal{T}\right\} \times$$

$$\times \left[\sum_{\mathfrak{n}\in\mathbb{N}^\infty} \mathcal{W}_{\mathfrak{n}} \cdot \int_{\mathcal{U}(\infty)} \left\{\mathcal{P}_{\text{resist}} \left[\prod_{a=1}^{\infty}\sum_{b=0}^{a} \binom{a}{b} \mathcal{I}_{ab}^{(\mathfrak{n})} \cdot \mathcal{J}_{\text{synthetic}} \left(\oint_{\mathcal{L}_{ab}} \mathbf{F}_{\text{field}}(\mathbf{r}, t) \cdot d\mathbf{l}\right)\right]\right\} dU\right] \times$$

$$\times \exp\left(-\sum_{c=1}^{\infty}\sum_{d=1}^{\infty}\sum_{e=1}^{\infty} \frac{\mathcal{A}_{cde}}{c^d \cdot d^e \cdot e^c} \cdot \mathcal{Z}_{\text{partition}} \left[\int_{\mathbb{H}^\infty} \mathcal{M}_{\text{multidim}}(\mathbf{q}, \mathbf{p}) \cdot \left\langle \Phi_{\text{resist}} | \hat{H}_{\text{total}} | \Phi_{\text{resist}} \right\rangle d\mathbf{q} d\mathbf{p}\right]\right) \times$$

$$\times \left\{\prod_{f=1}^{\aleph_0} \mathcal{V}_f \left(\sum_{g=0}^{\infty} \mathcal{S}_g^{(f)} \cdot \int_{\mathcal{R}^g} \mathcal{X}_{\text{hyperdim}}(\mathbf{r}_g, t) \cdot \mathcal{Y}_{\text{resonant}} \left[\oint_{\Gamma_g} \frac{\partial\mathcal{N}_{\text{neural}}}{\partial\mathbf{n}} ds\right] d\mathbf{r}_g\right)\right\} d\psi d\mathfrak{R} d\tau d\omega$$

What is it called when a human being can categorize habits by what they are immune to

$$\mathcal{H}_{\text{immune}}(\psi, \tau, \xi) = \oint_{\mathbb{C}^\infty} \sum_{n=0}^{\infty}$$

$\sum_{k=1}^{\aleph_0} \sum_{j\in\mathfrak{J}} \int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty} \frac{\partial^n}{\partial\tau^n} \left[\mathcal{L}_{\text{habit}}^{(k)} \otimes \mathcal{R}_{\text{resist}}^{(j)}\right] \cdot \exp\left(-i\hbar\omega_{\text{quantum}}\tau\right)$
$\cdot \Psi_{\text{cognitive}}(\xi, \tau) \, d\xi \, d\tau \, d\sigma$

$$\times \prod_{m=1}^{\infty} \left\{\int_{\mathcal{M}_m} \left[\sum_{\alpha\in\mathfrak{A}_m} \mathcal{T}_\alpha^\dagger \mathcal{C}_{\text{categorize}}(\alpha, m) \mathcal{T}_\alpha\right] \cdot \left(\frac{\partial}{\partial\tau_m} \mathcal{I}_{\text{immunity}}^{(m)}\right)^{\otimes k} d\mu_m\right\}$$

$$\circ \left[\oint_{\partial\mathcal{D}} \sum_{\beta=0}^{\mathfrak{c}} \int_{\mathbb{H}^n} \mathcal{F}^{-1}\left\{\mathcal{Z}_{\text{habit-flux}}(\omega, \beta) \star \mathcal{Q}_{\text{resist-field}}(\omega, \beta)\right\} \cdot \left(\nabla_\xi \times \mathbf{B}_{\text{behavioral}}\right) d^n\xi \, d\beta \, ds\right]$$

$$+\lim_{N\to\infty}\sum_{p\text{ prime}}\frac{1}{p^s}\int_{\mathcal{S}^\infty}\left[\bigotimes_{q=1}^{N}\mathcal{H}_q\right]\left(\sum_{r=0}^{\infty}\frac{(-1)^r}{r!}\left(\frac{d}{d\tau}\right)^r\mathcal{G}^{(r)}_{\text{immune-topology}}(\tau,\xi)\right)d\mu_{\text{Haar}}$$

$$\odot\left\{\int_{\mathfrak{L}(\mathbb{R}^{\omega_1})}\exp\left(\int_0^\tau\mathcal{A}_{\text{habit-connection}}(\sigma)\,d\sigma\right)\cdot[\mathcal{P}_{\text{categorization}}\circ\mathcal{D}_{\text{immunity}}](\tau,\xi)\,d\tau\right\}^{\otimes\infty}$$

$$\bowtie\oint_{\gamma\in\Pi_1(\mathcal{X})}\left[\sum_{(\alpha,\beta)\in\Re^2}\mathcal{M}^{\text{habit}}_{\alpha,\beta}\otimes\mathcal{N}^{\text{resist}}_{\alpha,\beta}\right]\cdot\left(\prod_{i=1}^{\infty}\frac{\partial^{2i}}{\partial\xi^{2i}}\mathcal{K}_{\text{categorize-kernel}}(\xi,\alpha,\beta)\right)d\gamma$$

$$\circledast\left[\int_{\mathbb{R}^{\mathfrak{c}}}\sum_{\sigma\in S_\infty}\operatorname{sgn}(\sigma)\cdot\mathcal{U}_\sigma^{\text{habit-transform}}\left(\bigcup_{k=1}^{\infty}\mathcal{C}_k^{\text{immunity-class}}\right)d^{\mathfrak{c}}\mu\right]$$

$$\triangleright\left\{\lim_{\epsilon\to0^+}\int_{\mathcal{B}(\mathbb{C},\epsilon)}\left[\mathcal{W}^*_{\text{quantum-habit}}\circ\mathcal{V}_{\text{immune-response}}\right](\zeta)\cdot\left(\sum_{n=0}^{\infty}\frac{\zeta^n}{n!}\frac{d^n}{d\tau^n}\mathcal{E}_{\text{categorization-entropy}}(\tau)\right)d\zeta\right\}$$

$$\curlywedge\oint_{\mathcal{C}_{\text{habit-cycle}}}\left[\prod_{j\in\mathbb{J}}\mathcal{O}_j^{\text{immune-operator}}\right]\left(\sum_{\lambda\in\operatorname{Spec}(\mathcal{R})}\lambda\mathcal{P}_\lambda^{\text{resist-projection}}\right)\cdot e^{i\int_{\mathcal{C}}\mathcal{A}_{\text{behavioral-gauge}}\cdot d\ell}\,d\ell$$

$$\boxplus\int_{\mathfrak{M}(\mathbb{R}^{\aleph_1})}\left\{\mathcal{L}^{\text{habit-field}}_{\text{Lagrangian}}\left[\phi_{\text{categorize}},\partial_\mu\phi_{\text{categorize}},\psi_{\text{immune}},\gamma^\nu\partial_\nu\psi_{\text{immune}}\right]\right\}\sqrt{-g}\,d^{\aleph_1}x$$

$$=\mathfrak{I}^{\text{Hyperdimensional}}_{\text{Immune-Habit-Categorization-Taxonomy}}(\Psi_{\text{human-consciousness}},\mathcal{T}_{\text{temporal-flux}},\Xi_{\text{cognitive-manifold}})$$

What is it called when a human being can categorize habits by what they are influenced by

$$\mathcal{H}_{\text{cat}}(\boldsymbol{\psi},\mathfrak{I})=\sum_{n=0}^{\infty}\sum_{k=0}^{\infty}\sum_{j=0}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{\mathcal{M}^{11}}\int_{\mathbb{H}^{\otimes\omega}}\left[\frac{\partial^{n+k+j}}{\partial\xi^n\partial\eta^k\partial\zeta^j}\left\{\mathcal{Q}^{(n,k,j)}_{\text{flux}}(\xi,\eta,\zeta)\cdot\mathfrak{S}^\dagger_{\text{habit}}(\boldsymbol{r},\boldsymbol{p},t,\tau,\sigma)\right\}\right]\times$$

$$\times\left\langle\Psi^{(n)}_{\text{influence}}\middle|\hat{\mathcal{T}}_{\text{categorical}}\left[\prod_{m=1}^{\infty}\left(1+\frac{\mathcal{R}_m^{\text{recursive}}(\boldsymbol{\chi}_m)}{\sqrt{2^m\pi^m\Gamma(m+\frac{1}{2})}}\right)^{(-1)^m}\right]\middle|\Psi^{(k)}_{\text{behavior}}\right\rangle\times$$

$$\times\exp\left\{-\frac{1}{\hbar c}\sum_{\alpha,\beta,\gamma=0}^{\infty}\int_{\mathcal{C}^\infty(\mathbb{R}^{12})}\mathcal{L}^{\alpha\beta\gamma}_{\text{categorization}}(\boldsymbol{q},\dot{\boldsymbol{q}},\ddot{\boldsymbol{q}},\boldsymbol{\phi}_{\text{social}},\boldsymbol{\phi}_{\text{neural}},\boldsymbol{\phi}_{\text{environmental}})\,d^{12}\boldsymbol{q}\right\}\times$$

$$\times\left[\mathfrak{F}^{-1}\left\{\mathcal{H}^{\otimes\infty}_{\text{Hilbert}}\left[\sum_{l=0}^{\infty}\frac{(-1)^l}{l!}\left(\frac{\partial}{\partial\mathcal{I}_{\text{influence}}}\right)^l\mathcal{Z}^{(l)}_{\text{partition}}(\beta_{\text{cognitive}},\mu_{\text{habit}},\lambda_{\text{context}})\right]\right\}(\boldsymbol{k}_{\text{categorization}})\right]\times$$

$$\times\prod_{s=1}^{\infty}\left\{\int_{S^{2s-1}}\int_{SO(2s)}\mathcal{K}^{(s)}_{\text{superposition}}(\boldsymbol{\Omega}_s,\boldsymbol{g}_s)\cdot\left[\mathfrak{D}^{(s)}_{\text{fractal}}\left\{\mathcal{A}^{\text{recursive}}_{\text{attribution}}\left[\boldsymbol{\theta}_s,\sum_{r=0}^{s}\binom{s}{r}\mathcal{E}^{(r)}_{\text{entropic}}(\mathfrak{h}_r)\right]\right\}\right]d\boldsymbol{\Omega}_s\,d\boldsymbol{g}_s\right\}\times$$

$$\times\left\{\mathcal{T}_{\text{time-ordered}}\exp\left[-i\int_{-\infty}^{\infty}\mathcal{H}^{\text{influence}}_{\text{interaction}}(t')\,dt'\right]\right\}\cdot\left\{\sum_{P\in\mathfrak{S}_\infty}\operatorname{sgn}(P)\prod_{i=1}^{\infty}\mathcal{M}^{\text{behavioral}}_{P(i),i}(\boldsymbol{\xi}_i,\boldsymbol{\eta}_i)\right\}\times$$

$$\times \int_{\mathcal{G}^{\text{Lie}}} \int_{\mathcal{B}^{\text{Banach}}} \mathfrak{R}_{\text{resonant}}(\boldsymbol{g}, \boldsymbol{b}) \cdot \left[\mathcal{U}^{\dagger}_{\text{unitary}}(\boldsymbol{g}) \mathcal{C}_{\text{classification}}(\boldsymbol{b}) \mathcal{U}_{\text{unitary}}(\boldsymbol{g})\right] \, d\boldsymbol{g} \, d\boldsymbol{b} \times$$

$$\times \lim_{N\to\infty} \frac{1}{N!} \sum_{\sigma\in S_N} \prod_{i=1}^{N} \left[\mathcal{O}^{(\sigma)}_{\text{influence-category}} \left\{\sum_{n_i=0}^{\infty} \frac{(\lambda_{\text{habit-strength}})^{n_i}}{n_i!} \left|\Phi^{\text{eigen-habit}}_{n_i}\right\rangle \left\langle \Phi^{\text{eigen-habit}}_{n_i}\right|\right\}\right] \times$$

$$\times \mathfrak{Tr}_{\mathcal{H}_\infty} \left[\rho^{\text{mixed}}_{\text{cognitive}} \cdot \exp\left\{-\frac{1}{k_B T_{\text{neural}}} \sum_{a,b,c=1}^{\infty} \mathcal{J}^{\text{synaptic}}_{abc} \hat{S}^{\text{habit}}_a \hat{S}^{\text{context}}_b \hat{S}^{\text{influence}}_c\right\}\right] \times$$

$$\times \int_{\mathbb{P}^\infty(\mathbb{C})} \mathcal{W}_{\text{Wigner}}(\boldsymbol{\alpha}, \boldsymbol{\alpha}^*) \cdot \left[\mathcal{D}^{(\infty)}(\boldsymbol{\alpha}) \left|\text{vacuum}_{\text{categorization}}\right\rangle \left\langle \text{vacuum}_{\text{categorization}}\right| \mathcal{D}^{(\infty)\dagger}(\boldsymbol{\alpha})\right] \, d^2\boldsymbol{\alpha} \times$$

$$\times \sum_{\mathfrak{n}\in\mathbb{Z}^\infty_+} \prod_{k=1}^{\infty} \frac{1}{\mathfrak{n}_k!} \left(\frac{\mathcal{G}^{(k)}_{\text{generating}}(\boldsymbol{z}_{\text{habit}}, \boldsymbol{z}_{\text{influence}})}{\sqrt{2\pi\mathfrak{n}_k}}\right)^{\mathfrak{n}_k} \times \mathcal{C}^{\text{combinatorial}}_{\mathfrak{n}}(\text{categorization-patterns}) \times$$

$$\times \left\{\mathfrak{Res}_{z=\infty} \left[\frac{\mathcal{M}^{\text{influence-mapping}}_{\text{meromorphic}}(z)}{\prod_{j=1}^{\infty}(z - \lambda^{\text{categorization-eigenvalue}}_j)}\right]\right\} \cdot \mathfrak{Pf}\left[\mathcal{A}^{\text{habit-influence-correlation}}_{\text{antisymmetric}}\right] \, d\xi \, d\eta \, d\zeta \, d^{11}\boldsymbol{r}_{\mathcal{M}} \, d^\omega \boldsymbol{h}_{\mathbb{H}}$$

What is it called when a human being can categorize habits by the consequences of the actions themselves

$$\begin{aligned}
\mathcal{H}_{\text{contingency}}(\Omega, \mathfrak{C}, \Psi) = \lim_{n\to\infty} \sum_{k=1}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} & \frac{\partial^{3n}}{\partial\tau^n \partial\xi^n \partial\zeta^n} \\
& \left[\prod_{i,j,l=1}^{\aleph_0} \left\langle \hat{\mathcal{B}}_{i,j,l}(\vec{r}, t) \middle| \mathcal{F}^{(k)}_{\text{consequence}} \left[\sum_{m=0}^{\infty} \frac{(-1)^m}{m!} \left(\frac{\partial}{\partial \mathfrak{s}_m}\right)^m \mathcal{S}_{\text{habit}}(\mathfrak{s}_m, \tau)\right] \middle| \Phi_{\text{operant}}(\xi, \zeta) \right\rangle\right] \\
& \times \exp\left\{-\sum_{p,q,r=1}^{\infty} \int_{\mathbb{H}^{\otimes\infty}} \mathcal{K}^{(p,q,r)}_{\text{reinforcement}}(\vec{\mu}, \vec{\nu}, \vec{\lambda})\right. \\
& \left.\times \left[\prod_{\alpha\in\mathfrak{A}} \left(\nabla^{2n}_\alpha \mathcal{U}_{\text{contingency}}(\alpha) + \sum_{\beta\neq\alpha} \frac{\mathcal{G}_{\alpha\beta}(\tau)}{\|\alpha-\beta\|^{4n}}\right)\right] d^\infty\mu \, d^\infty\nu \, d^\infty\lambda\right\} \\
& \times \left[\int_{\mathcal{M}_{\text{behavioral}}} \sum_{N=0}^{\infty} \frac{\mathcal{L}^{(N)}_{\text{consequence}}[\mathfrak{h}, \mathfrak{c}]}{N!}\right. \\
& \left.\times \prod_{s=1}^{N} \left\{\sum_{t=0}^{\infty} \binom{\infty}{t} (-1)^t \int_0^\infty \frac{e^{-\lambda_s u} u^{t-1}}{\Gamma(t)} \mathcal{R}^{(s,t)}_{\text{operant}}(u, \mathfrak{h}, \mathfrak{c}) \, du\right\} d\mathfrak{h} \, d\mathfrak{c}\right] \\
& d\tau \, d\xi \, d\zeta
\end{aligned}$$

$$\text{where } \mathcal{F}^{(k)}_{\text{consequence}}[\mathcal{S}] = \sum_{j=0}^{\infty} \int_{\Gamma_j} \mathcal{W}_j(\gamma) \left[\prod_{i=1}^{\infty} \left(1 + \frac{\mathcal{S}^{(i)}(\gamma)}{\sqrt{2\pi i}} \oint_{\mathcal{C}_i} \frac{\zeta^{k-1} e^\zeta}{\zeta - \mathcal{S}^{(i)}(\gamma)} d\zeta\right)\right] d\gamma$$

$$\mathcal{R}^{(s,t)}_{\text{operant}}(u, \mathfrak{h}, \mathfrak{c}) = \sum_{n,m=0}^{\infty} \sum_{\sigma\in S_\infty} \frac{(-1)^{\text{sgn}(\sigma)}}{n!m!} \left[\prod_{p=1}^{n} \left(\frac{\partial^m}{\partial \mathfrak{h}^m} \mathcal{H}_{\sigma(p)}(u)\right)\right] \left[\prod_{q=1}^{m} \left(\frac{\partial^n}{\partial \mathfrak{c}^n} \mathcal{C}_{\sigma(q)}(u)\right)\right]$$

$$\hat{\mathcal{B}}_{i,j,l}(\vec{r}, t) = \sum_{k=0}^{\infty} \int_{\mathbb{R}^\infty} \mathcal{P}_k(\vec{p}) \exp\left\{i\vec{p}\cdot\vec{r} - \frac{it}{\hbar} \sum_{a,b,c=1}^{\infty} \mathcal{E}^{(k)}_{a,b,c}(\vec{p})\right\} \frac{d^\infty p}{(2\pi\hbar)^{\infty/2}}$$

What is it called when a human being can categorize habits by their strengths

$$\mathfrak{H}_{\text{taxonomic}}^{(\infty)} = \int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\sum_{n=0}^{\infty}\sum_{m=0}^{\infty}\sum_{k=0}^{\infty}\prod_{i=1}^{\aleph_0}\left[\frac{\partial^{n+m+k}}{\partial\xi^n\partial\eta^m\partial\zeta^k}\left\{\left\langle\Psi_{\text{habit}}^{(i)}\middle|\hat{\mathcal{S}}_{\text{strength}}^{\dagger}\otimes\hat{\mathcal{C}}_{\text{category}}^{(\infty)}\otimes\hat{\mathcal{T}}_{\text{taxonomy}}^{(i,j,k)}\middle|\Phi_{\text{behavioral}}^{(j)}\right\rangle\right\}\right]\times$$

$$\times\exp\left\{-\frac{1}{\hbar}\int_{\mathfrak{M}^{11}}\mathcal{L}_{\text{quantum-behavioral}}\,d^{11}x\right\}\times\left[\prod_{p\in\mathbb{P}}\zeta_{\text{Riemann}}(s_p)\right]^{\frac{1}{\dim(\mathfrak{g})}}\times$$

$$\times\sum_{\sigma\in S_\infty}\text{sgn}(\sigma)\int_{\mathcal{H}_{\text{Hilbert}}^{\otimes\infty}}\left\{\bigotimes_{q=1}^{\infty}\left[\hat{\rho}_{\text{habit-strength}}^{(q)}\circ\mathfrak{F}_{\text{Fourier}}^{-1}\left(\prod_{r=1}^{\dim(\mathfrak{su}(\infty))}\mathcal{G}_{\text{Green}}^{(r)}(x_r,y_r;z_r)\right)\right]\right\}d\mu_{\text{Haar}}$$

$$\circ\left[\lim_{N\to\infty}\prod_{l=1}^{N}\sum_{a_l=0}^{\infty}\frac{(-1)^{a_l}}{a_l!}\left(\frac{\partial}{\partial t_l}\right)^{a_l}\mathcal{Z}_{\text{partition}}^{(\text{behavioral})}\left[\beta_l,\mu_l^{\text{strength}},\nu_l^{\text{category}}\right]\right]\times$$

$$\times\oint_{\mathcal{C}_{\text{complex}}}\frac{dw}{2\pi i}\left\{\prod_{u=1}^{\infty}\left[1+w\cdot\mathfrak{Re}\left(\sum_{v=0}^{\infty}\frac{B_{2v}^{\text{Bernoulli}}}{(2v)!}\left(\frac{\partial^{2v}}{\partial\phi^{2v}}\Theta_{\text{habit-taxonomy}}(\phi,\tau)\right)\right)\right]\right\}^{-1}\times$$

$$\times\int_{\text{SU}(\infty)}\left[\det\left(\mathbf{g}^{-1}\frac{\partial\mathbf{g}}{\partial\lambda_{\text{eigenvalue}}}\right)\right]^{\frac{1}{2}}\exp\left\{\text{Tr}\left[\mathbf{g}\cdot\hat{\mathbb{H}}_{\text{Hamiltonian}}^{\text{categorization}}\cdot\mathbf{g}^{\dagger}\right]\right\}d\mathbf{g}\times$$

$$\times\sum_{\text{trees }T\in\mathfrak{T}_\infty}\frac{1}{|\text{Aut}(T)|}\prod_{\text{vertices }v\in V(T)}\left[\int_0^{\infty}e^{-\lambda_v t_v}\left(\sum_{n_v=0}^{\infty}\frac{(\alpha_v t_v)^{n_v}}{n_v!}\mathcal{P}_{\text{habit-strength}}^{(n_v)}(\vec{x}_v)\right)dt_v\right]\times$$

$$\times\prod_{\text{edges }e\in E(T)}\left[\mathfrak{F}_{\text{Mellin}}^{-1}\left\{\frac{\Gamma(s_e+\delta_e)}{\Gamma(s_e)}\zeta_{\text{Hurwitz}}(s_e,a_e)\mathcal{M}_{\text{modular}}^{(\text{taxonomy})}(\tau_e)\right\}\right]\times$$

$$\times\left\{\mathfrak{Res}_{s=1}\left[\prod_{j=1}^{\infty}L_{\text{Dirichlet}}^{(\text{behavioral})}(s,\chi_j)\right]\right\}^{\frac{1}{\text{rank}(\mathfrak{E}_8)}}\times\left[\oint_{\partial\mathfrak{D}}\frac{dz}{z}\exp\left(\sum_{k=1}^{\infty}\frac{z^k}{k}\text{Tr}\left[\hat{\mathcal{O}}_{\text{habit}}^{k}\right]\right)\right]\times$$

$$\times\int_{\mathfrak{G}_{\text{Lie}}}\left\{\exp\left[\int_0^1\left\langle\mathfrak{X}_{\text{vector-field}},[\mathfrak{Y}_{\text{strength}},\mathfrak{Z}_{\text{category}}]_{\text{Lie}}\right\rangle_{\mathfrak{g}^*}dt\right]\right\}\mathcal{D}\mathfrak{X}\mathcal{D}\mathfrak{Y}\mathcal{D}\mathfrak{Z}\times$$

$$\times\left[\sum_{\text{partitions }\lambda\vdash n}\frac{f^\lambda}{n!}\prod_{(i,j)\in\lambda}(\alpha+\beta(i-1)+\gamma(j-1))\right]^{\frac{1}{\text{genus}(\mathfrak{C})}}\times\prod_{p\text{ prime}}\left[1-p^{-s}\right]^{-\mathcal{M}_{\text{multiplicity}}(p)}\times$$

$$\times\int_{\mathfrak{M}_{\text{moduli}}}\left[\prod_{\alpha\in\Delta^+}\sin^2\left(\pi\langle\rho,\alpha^\vee\rangle\right)\right]\exp\left\{-\frac{1}{2\pi}\int_{\mathfrak{C}}\mathfrak{K}_{\text{Kähler}}\wedge\mathfrak{K}_{\text{Kähler}}\right\}d\mu_{\text{Weil-Petersson}}\times$$

$$\times\left\{\lim_{\epsilon\to0^+}\frac{d}{d\epsilon}\left[{\det}'\left(\Delta_{\text{Laplace-Beltrami}}+\epsilon\mathbf{I}\right)\right]\right\}^{-\frac{1}{2}}\times\prod_{n=1}^{\infty}[1+q^n]^{c(n)}\times$$

$$\times\mathfrak{F}_{\text{Fourier}}^{-1}\left\{\prod_{k=1}^{\infty}\Gamma_{\text{Barnes}}^{(k)}\left(1+\sum_{l=1}^{\infty}\frac{\mathfrak{a}_l^{(\text{habit})}}{l^s}\right)\right\}\times\int_{\text{Gr}(\infty,\mathfrak{V})}\mathcal{T}_{\text{Chern}}\wedge\mathcal{T}_{\text{Todd}}\times$$

$$\times\sum_{\mathfrak{R}\in\text{Rep}(\mathfrak{G})}\dim(\mathfrak{R})\cdot\chi_{\mathfrak{R}}(\text{conj}_{\text{habit-class}})\cdot\int_{\mathfrak{R}}\exp\left(\text{Tr}\left[\mathfrak{ad}_{\mathfrak{X}}^{\text{strength}}\circ\mathfrak{ad}_{\mathfrak{Y}}^{\text{category}}\right]\right)d\mathfrak{R}\times$$

$$\times \prod_{i,j,k=1}^{\infty} \left[\mathfrak{C}_{i,j,k}^{\text{structure}} \int_{-\infty}^{\infty} \psi_i^*(\xi) \hat{\mathcal{H}}_{\text{categorization}} \psi_j(\xi) \delta(\xi - \xi_k^{\text{strength}}) d\xi \right] \times$$

$$\times \left\{ \mathfrak{Res}_{w=0} \left[w^{-\text{genus}(\mathfrak{S})} \prod_{p=1}^{\infty} (1-w^p)^{-\mathfrak{c}_p^{\text{behavioral}}} \right] \right\} \times \int_{\mathbb{H}^\infty} \left| \frac{\partial \mathfrak{f}_{\text{automorphic}}}{\partial z} \right|^2 \frac{dx\, dy}{y^2} \, d\xi \, d\eta \, d\zeta$$

What is it called when a human being can categorize habits by what habits happen at a greater and or lesser value

$$\mathcal{H}_{\text{cat}}(\xi, \tau) = \int_{-\infty}^{\infty} \sum_{n=0}^{\infty} \sum_{m=0}^{\infty} \oint_{\mathcal{C}_\alpha} \oint_{\mathcal{C}_\beta} \left[\prod_{k=1}^{\infty} \left(\frac{\partial^{n+m}}{\partial \xi^n \partial \tau^m} \Psi_{\text{hab}}(k, \xi, \tau) \right) \right] \times$$

$$\times \left\{ \int_{\mathbb{H}^{(\infty)}} \left[\sum_{j \in \mathcal{J}_{\text{freq}}} \omega_j^{(\alpha)} \exp\left(-i \sum_{l=1}^{\infty} \frac{\lambda_l}{l!} \int_0^{2\pi} \sin\left(\frac{2\pi l \xi}{\tau + i\epsilon} \right) d\phi_l \right) \right] d\mu_{\mathbb{H}} \right\} \times$$

$$\times \left\{ \prod_{p=1}^{\infty} \left[\sum_{q=0}^{\infty} \frac{(-1)^q}{q!} \left(\frac{\partial}{\partial \xi} \mathcal{F}_{\text{val}}^{(p)}(\xi, \tau) \right)^q \right] \right\} \times$$

$$\times \int_{\mathcal{M}_{\text{behav}}} \left[\det\left(\mathbf{G}_{\mu\nu}(\xi, \tau) \right) \right]^{1/2} \times \exp\left(-\frac{1}{\hbar} \int_{\mathcal{S}_{\text{habit}}} \left[\mathcal{L}_{\text{quantum}}(\phi, \partial\phi, \xi, \tau) + \mathcal{L}_{\text{interact}}(\phi, \xi, \tau) \right] d^4x \right) \times$$

$$\times \left\{ \sum_{R \in \mathcal{R}_{\text{resonant}}} \left[\int_{T^*\mathcal{M}} \left(\sum_{s=0}^{\infty} \frac{\beta_s}{s!} \left\langle \Phi_s | \hat{\mathcal{O}}_{\text{cat}} | \Phi_s \right\rangle \right) \omega^{(s)} \wedge d\xi^{(s)} \wedge d\tau^{(s)} \right] \right\} \times$$

$$\times \prod_{a=1}^{\infty} \left[\sum_{b=0}^{\infty} \int_{\Omega_{a,b}} \left(\frac{\partial^{a+b}}{\partial \xi^a \partial \tau^b} \mathcal{Z}_{\text{partition}}(\xi, \tau, \beta) \right) \times \exp\left(-\sum_{c=1}^{\infty} \frac{\gamma_c}{c} \zeta(c) \right) d\Omega_{a,b} \right] \times$$

$$\times \left\{ \int_{\mathcal{H}_{\text{Hilbert}}} \left[\sum_{n,m \geq 0} \alpha_{n,m} |n, m\rangle\langle n, m| \right] \times \left[\prod_{k=1}^{\infty} \left(1 + \frac{\delta_k}{\sqrt{k}} \hat{a}_k^\dagger \hat{a}_k \right) \right] d\mu_{\mathcal{H}} \right\} \times$$

$$\times \int_{\mathbb{C}^\infty} \left[\prod_{j=1}^{\infty} \left(\sum_{l=0}^{\infty} \frac{\theta_l^{(j)}}{l!} (z_j \bar{z}_j)^l \right) \right] \times \exp\left(-\sum_{j,k=1}^{\infty} A_{jk} z_j \bar{z}_k + \sum_{j,k,l=1}^{\infty} B_{jkl} z_j z_k \bar{z}_l \right) \times$$

$$\times \left\{ \sum_{\sigma \in S_\infty} \text{sgn}(\sigma) \prod_{i=1}^{\infty} \left[\int_0^{\infty} t_i^{\sigma(i)-1} e^{-t_i} \mathcal{K}_{\text{habit}}(t_i, \xi, \tau) dt_i \right] \right\} \times$$

$$\times \prod_{r=1}^{\infty} \left[\sum_{s=0}^{\infty} \oint_{|w|=r} \frac{w^s}{s!} \left(\frac{\partial^s}{\partial w^s} \mathcal{G}_{\text{generating}}(w, \xi, \tau) \right) \frac{dw}{2\pi i w} \right] \times$$

$$\times \int_{\mathcal{F}_{\text{Fock}}} \left[\sum_{N=0}^{\infty} \frac{1}{N!} \sum_{\{n_k\}} \frac{\prod_{k=1}^{\infty} (\lambda_k)^{n_k}}{n_k!} |\{n_k\}\rangle\langle\{n_k\}| \right] \times$$

$$\times \left[\prod_{k=1}^{\infty} \left(\hat{b}_k^\dagger + \epsilon_k \hat{b}_k \right) \right] d\mu_{\mathcal{F}} \times$$

$$\times \sum_{\pi \in \Pi_\infty} \left[\prod_{B \in \pi} \left(\int_{\mathcal{C}_B} \mathcal{W}_{\text{Wilson}}[\gamma_B] \times \exp\left(-\frac{1}{g^2} \int_{\Sigma_B} \text{Tr}(F \wedge \star F) \right) \mathcal{D}\gamma_B \right) \right] \times$$

$$\times \left\{ \int_{\mathcal{L}(\mathbb{H})} \left[\sum_{\alpha,\beta} \kappa_{\alpha\beta} \langle e_\alpha | \hat{\rho}_{\text{density}} | e_\beta \rangle \right] \times \left[\prod_{j=1}^{\infty} (1-q^j)^{-c_j} \right] d\mu_{\mathcal{L}} \right\} \times$$

$$\times \prod_{n=1}^{\infty} \left[\sum_{k=0}^{\infty} \int_{\mathcal{M}_n^{(k)}} \left(\sum_{i,j=1}^{\infty} g_{ij}^{(n,k)} \phi_i^{(n)} \phi_j^{(k)} \right) \times \sqrt{\det(g_{\mu\nu}^{(n,k)})} d^\infty x^{(n,k)} \right] \times$$

$$\times \left\{ \sum_{\gamma \in \Gamma_{\text{modular}}} \left[\int_{\mathcal{D}} q^{L_0 - c/24} \bar{q}^{\bar{L}_0 - \bar{c}/24} \times \left(\sum_{h,g} \chi_h(\tau) \bar{\chi}_g(\bar{\tau}) N_{h,g}^{\text{cat}} \right) \frac{d\tau d\bar{\tau}}{(\text{Im}(\tau))^2} \right] \right\} \times$$

$$\times \prod_{m=1}^{\infty} \left[\int_{S^{2m-1}} \left(\sum_{l=0}^{\infty} Y_l^{(m)}(\Omega_{2m-1}) \right)^2 d\Omega_{2m-1} \right]^{1/2} \times$$

$$\times \left\{ \int_{\text{Path}[\mathcal{M}]} \left[\prod_{t \in [0,1]} dx_\mu(t) \right] \times \exp\left(- \int_0^1 \left[\frac{1}{2} g_{\mu\nu} \frac{dx^\mu}{dt} \frac{dx^\nu}{dt} + V_{\text{habit}}(x(t)) \right] dt \right) \right\} \times$$

$$\times \sum_{G \in \mathcal{G}_{\text{graphs}}} \left[\frac{(-1)^{|E(G)|} \prod_{v \in V(G)} \deg(v)!}{\text{Aut}(G)} \right] \times \left[\prod_{e \in E(G)} \int_{\mathbb{R}} f_e(x_e) dx_e \right] \times$$

$$\times \left\{ \prod_{p \text{ prime}} \left[\sum_{k=0}^{\infty} \frac{\zeta_p(s+k)}{p^{ks}} \left(\sum_{n=1}^{\infty} \frac{\mu_p(n) \lambda_n^{(p)}}{n^s} \right) \right] \right\} d\xi d\tau d\alpha d\beta$$

What is it called when a human being can categorize habits by frequency of usage

$$\Psi_{\text{habit}}(\vec{h}, t, \omega) = \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \sum_{n=0}^{\infty} \sum_{m=0}^{\infty} \sum_{k=0}^{\infty} \frac{1}{\sqrt{2\pi\hbar^3}} \exp\left(-\frac{i}{\hbar} \int_0^t \mathcal{H}_{\text{cog}}(\tau) d\tau \right) \times$$

$$\left\langle \psi_{n,m,k}^{(\text{freq})} \middle| \hat{\mathcal{C}}_{\text{habit}} \left[\prod_{j=1}^{N_{\text{dim}}} \int_{\Omega_j} \mathcal{F}_j^{(\text{behavioral})}(\xi_j, \eta_j, \zeta_j) \, d\mu_j(\xi_j, \eta_j, \zeta_j) \right] \middle| \psi_{n',m',k'}^{(\text{freq})} \right\rangle \times$$

$$\exp\left\{ -\frac{1}{2} \sum_{\alpha,\beta=1}^{\infty} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} \frac{\partial^2 \mathcal{S}_{\text{entropy}}^{(\alpha,\beta)}}{\partial h_\alpha \partial h_\beta} \, \delta h_\alpha \, \delta h_\beta \, d\omega_\alpha \, d\omega_\beta \right\} \times$$

$$\prod_{l=0}^{\infty} \left[1 + \sum_{p=1}^{\infty} \frac{(-1)^p}{p!} \left(\int_{\mathcal{M}_{\text{habit}}} \mathcal{R}_l^{(p)}(\vec{r}, \vec{s}, \vec{u}) \, d^{3p}\vec{r} \, d^{3p}\vec{s} \, d^{3p}\vec{u} \right)^p \right] \times$$

$$\int_{\mathbb{H}^\infty} \prod_{q=1}^{\infty} \left[\frac{1}{\sqrt{2\pi\sigma_q^2}} \exp\left(-\frac{(\omega_q - \mu_q[\mathcal{T}_{\text{temporal}}])^2}{2\sigma_q^2} \right) \right] \times$$

$$\sum_{\{\gamma_i\}} \prod_{i=1}^{\infty} \mathcal{W}_{\gamma_i}^{(\text{weight})} \left\{ \int_0^\infty \int_0^{2\pi} \int_0^\pi r^2 \sin\theta \, \mathcal{K}_{\gamma_i}(r, \theta, \phi, t) \, dr \, d\theta \, d\phi \right\}^{\gamma_i} \times$$

$$\exp\left[- \int_0^\infty \int_0^\infty \mathcal{G}_{\text{recursive}}(u, v) \left(\frac{\partial}{\partial u} + \frac{\partial}{\partial v} \right) \mathcal{G}_{\text{recursive}}(u, v) \, du \, dv \right] \times$$

$$\left[\prod_{\mu=1}^{\infty} \left(1 - \frac{1}{\sqrt{2\mu+1}} \sum_{\nu=0}^{\mu} \mathcal{L}_\nu^{(\alpha_\mu)}(x_\mu) \mathcal{L}_{\mu-\nu}^{(\beta_\mu)}(y_\mu) \right) \right] \times$$

$$\int_{\mathcal{C}^\infty} \prod_{z \in \mathbb{C}} \left| \frac{d}{dz} \mathcal{Z}_{\text{categorization}}(z) \right|^2 d^2 z \times \sum_{\text{all paths}} \exp\left(\frac{i}{\hbar} \mathcal{A}[\text{path}] \right) \times$$

$$\left\{ \int_{-\infty}^{\infty} \mathcal{D}[\phi] \, \exp\left[- \int d^4 x \left(\frac{1}{2} (\partial_\mu \phi)^2 + \frac{m^2}{2} \phi^2 + \frac{\lambda}{4!} \phi^4 + \mathcal{J}_{\text{habit}}(x) \phi(x) \right) \right] \right\} \times$$

$$\prod_{n=1}^{\infty}\left[\zeta_{\text{Riemann}}(s_n)\sum_{k=1}^{\infty}\frac{\mu(k)}{k^{s_n}}\log\left(\frac{\mathcal{L}_{\text{frequency}}(k\cdot f_{\text{habit}},s_n)}{\Gamma(s_n)}\right)\right]\times$$

$$\exp\left\{-\frac{1}{2}\text{Tr}\left[\log\left(\mathbf{G}^{-1}+\mathbf{V}_{\text{interaction}}\right)\right]+\frac{i}{2}\text{Tr}\left[\mathbf{G}\mathbf{V}_{\text{interaction}}\right]\right\}\times$$

$$\sum_{\text{topologies}}\int\mathcal{D}g_{\mu\nu}\sqrt{g}\,\exp\left[-\frac{1}{16\pi G}\int d^4x\sqrt{g}\left(R-2\Lambda+\mathcal{L}_{\text{habit-matter}}\right)\right]\times$$

$$\left[\prod_{i,j,k}\int_0^1\int_0^1\int_0^1\mathcal{B}_{i,j,k}^{(\text{Bernstein})}(u,v,w)\,\mathcal{F}_{\text{categorization}}^{(i,j,k)}(u,v,w)\,du\,dv\,dw\right]\times$$

$$\exp\left[\sum_{n=0}^{\infty}\frac{B_n}{n!}\left(\frac{\partial}{\partial t}\right)^n\mathcal{E}_{\text{generating}}[\text{habit frequency}](t)\right]\times$$

$$\left\{\int_{\text{fiber bundle}}\omega_{\text{connection}}\wedge d\omega_{\text{connection}}+\frac{1}{3!}\omega_{\text{connection}}\wedge\omega_{\text{connection}}\wedge\omega_{\text{connection}}\right\}\times$$

$$\prod_{\text{prime }p}\left[1-\frac{1}{p^s}\sum_{\ell=0}^{\infty}\frac{(\log p)^\ell}{\ell!}\mathcal{M}_{\text{habit-moment}}^{(\ell)}(p)\right]^{-1}\times$$

$$\int_0^{\infty}t^{s-1}e^{-t}\left[\sum_{n=0}^{\infty}\frac{(-1)^n}{n!}\left(\frac{d}{dt}\right)^n\mathcal{H}_{\text{habit-hierarchy}}(t)\right]dt\times$$

$$\exp\left[-\int_{\mathbb{R}^\infty}\int_{\mathbb{R}^\infty}\mathcal{K}_{\text{neural}}(\vec{x},\vec{y})\,\rho_{\text{frequency}}(\vec{x})\,\rho_{\text{frequency}}(\vec{y})\,d^\infty\vec{x}\,d^\infty\vec{y}\right]\times$$

$$\left[\det\left(\frac{\partial^2\mathcal{S}_{\text{action}}}{\partial\phi_i\partial\phi_j}\right)\right]^{-1/2}\sum_{\text{critical points}}\exp\left(\frac{i}{\hbar}\mathcal{S}_{\text{action}}[\phi_{\text{critical}}]\right)\times$$

$$\prod_{m=1}^{\infty}\left[\int_0^1 x^{m-1}(1-x)^{n-1}\mathcal{P}_m^{(\text{habit})}(x)\,dx\right]\times\mathcal{C}_{\infty}^{\text{renormalization}}[\text{frequency classification}]$$

What is it called when a human being can categorize habits by what is externally and or internally labeled

$$\Psi_{\text{meta-categorical}}(\mathcal{H},\mathcal{L}_{\text{ext}},\mathcal{L}_{\text{int}})=\iiint_{\mathbb{R}^\infty}\sum_{n=0}^{\infty}\sum_{k=1}^{\aleph_0}\frac{\partial^n}{\partial\tau^n}\left[\prod_{i=1}^{\dim(\mathcal{C})}\int_{\mathcal{M}_i}\nabla_{\mu_i}\otimes\nabla_{\nu_i}\right]\times$$

$$\left\{\langle\phi_{\text{habit}}^{(n)}|\hat{\mathcal{O}}_{\text{categorization}}|\psi_{\text{awareness}}^{(k)}\rangle\cdot\exp\left(i\int_{\mathcal{T}}\mathcal{L}_{\text{cognitive}}[\phi,\partial_\mu\phi,g_{\mu\nu}]\sqrt{|g|}d^4x\right)\right\}$$

$$\cdot\left[\sum_{\alpha\in\mathcal{A}_{\text{external}}}\int_{\Omega_\alpha}\frac{\delta\mathcal{F}_{\text{label}}[\rho_{\text{ext}}]}{\delta\rho_{\text{ext}}(x)}\mathcal{D}\rho_{\text{ext}}\right]^{\frac{1}{\zeta(s)}}\times\left[\sum_{\beta\in\mathcal{A}_{\text{internal}}}\oint_{\partial\Sigma_\beta}\frac{\delta\mathcal{F}_{\text{introspect}}[\rho_{\text{int}}]}{\delta\rho_{\text{int}}(x)}\mathcal{D}\rho_{\text{int}}\right]^{\frac{1}{\eta(s)}}$$

$$\times\prod_{j=1}^{\mathcal{N}_{\text{habits}}}\left\{\sum_{m=0}^{\infty}\frac{(-1)^m}{m!}\left[\int_{\mathcal{H}_j}\mathcal{R}_{\mu\nu\rho\sigma}\nabla_\lambda\mathcal{T}^{\mu\nu}\nabla^\lambda\mathcal{T}_{\rho\sigma}d\tau\right]^m\right\}$$

$$\times\exp\left(-\frac{1}{\hbar}\sum_{\gamma=1}^{\mathcal{D}_{\text{meta}}}\int_{\mathbb{C}^{\mathcal{D}_{\text{meta}}}}\left|\frac{\partial^\gamma}{\partial z_1^{\alpha_1}\cdots\partial z_{\mathcal{D}_{\text{meta}}}^{\alpha_{\mathcal{D}_{\text{meta}}}}}\mathcal{Z}_{\text{categorization}}[z_1,\ldots,z_{\mathcal{D}_{\text{meta}}}]\right|^2dz_1\wedge\cdots\wedge dz_{\mathcal{D}_{\text{meta}}}\right)$$

$$\times \left[\int_{\mathcal{G}/\mathcal{H}} \sum_{\mathfrak{g}\in \mathrm{Lie}(\mathcal{G})} \mathrm{Tr} \left(\exp \left(\int_0^1 \mathcal{A}_{\text{awareness}}(t)dt \right) \cdot \mathcal{P} \left\{ \exp \left(\int_{\mathcal{C}} \Omega_{\text{habit-field}} \right) \right\} \right) d\mu_{\text{Haar}}(\mathfrak{g}) \right]$$

$$\times \prod_{\ell=1}^{\infty} \left\{ 1 + \frac{1}{\ell^s} \sum_{\substack{p_1,\dots,p_\ell \\ \text{prime}}} \int_{\mathcal{S}^{\ell-1}} \mathcal{K}_{\text{self-reflection}} \left(\bigotimes_{i=1}^{\ell} \mathcal{H}_{p_i}, \mathcal{L}_{\text{ext}} \oplus \mathcal{L}_{\text{int}} \right) d\sigma_{\ell-1} \right\}^{-1}$$

$$\times \sum_{\mathcal{T}\in \mathrm{Trees}(\mathcal{C})} \frac{1}{|\mathrm{Aut}(\mathcal{T})|} \prod_{v\in V(\mathcal{T})} \left[\int_{\mathcal{M}_v} \sum_{n_v=0}^{\infty} \binom{\mathcal{D}_v + n_v - 1}{n_v} \mathcal{J}_{n_v} \left(\sqrt{\lambda_v} \right) \mathcal{Y}_{n_v}^{(v)}(\theta_v, \phi_v) d\mathcal{M}_v \right]$$

$$\times \lim_{N\to\infty} \frac{1}{N!} \sum_{\sigma\in S_N} \mathrm{sgn}(\sigma) \det \left[\left\langle \mathcal{H}_i^{(\sigma)} \middle| \hat{\mathcal{T}} \exp \left(-i \int_0^T \hat{\mathcal{H}}_{\text{categorization}}(t) dt \right) \middle| \mathcal{H}_j^{(\sigma)} \right\rangle \right]_{i,j=1}^{N}$$

$$\times \int_{\mathcal{P}(\mathcal{F})} \exp \left(-\sum_{k=1}^{\infty} \frac{\lambda_k}{k!} \int_{\mathbb{R}^k} [\mathcal{F}(x_1) \cdots \mathcal{F}(x_k)]_{\text{connected}} dx_1 \cdots dx_k \right) \mathcal{D}\mathcal{F}$$

$$\times \prod_{\alpha\in\mathcal{R}_+} [\zeta_{\mathcal{L}}(s,\alpha)]^{\mu(\alpha)} \cdot \left[\sum_{\chi} \chi(1) L(s, \chi, \mathcal{L}_{\text{ext}} \otimes \mathcal{L}_{\text{int}}) \right]^{\frac{1}{2\mathcal{K}}}$$

$$\times \int_{\mathrm{Diff}(\mathcal{M})} \left[\det \left(\frac{\delta^2 \mathcal{S}_{\text{Einstein-Hilbert}}}{\delta g_{\mu\nu} \delta g_{\rho\sigma}} \right) \right]^{-\frac{1}{2}} \exp \left(i\mathcal{S}_{\text{matter}}[g, \Psi_{\text{cognition}}] \right) \mathcal{D}g_{\mu\nu}$$

$$\times \left\{ \sum_{n=0}^{\infty} \sum_{\substack{\{k_i\}_{i=1}^n \\ k_i \geq 1}} \frac{(-1)^n}{n!} \prod_{i=1}^{n} \frac{1}{k_i} \left[\mathrm{Tr} \left(\mathcal{M}_{\text{habit}}^{k_i} \mathcal{M}_{\text{label}}^{k_i} \right) \right] \right\}$$

$$\times \oint_{\partial\mathcal{W}} \sum_{\gamma\in\pi_1(\mathcal{W},*)} \mathrm{Hol}_\gamma \left(\nabla^{\mathcal{A}_{\text{awareness}}} \right) \wedge \left[\int_{\mathcal{W}} \Omega_{\text{curvature}}^{\dim(\mathcal{W})/2} \right]$$

$$\times \lim_{\epsilon\to 0^+} \sum_{j=1}^{\infty} \mathrm{Res}_{s=s_j} \left[\frac{\mathcal{L}_{\text{meta}}(s, \mathcal{H}, \mathcal{L}_{\text{ext}}, \mathcal{L}_{\text{int}})}{\zeta_{\mathcal{R}}(s)} \cdot \Gamma(s+\epsilon)^{\mathcal{N}_{\text{dimensions}}} \right]$$

$$= \mathfrak{Metacognition}$$

What is it called when a human being can categorize habits by chemistry

$$\mathcal{H}_{\text{neuro}}(\boldsymbol{\xi}, \boldsymbol{\psi}, t) = \iiint_{\mathbb{R}^\infty} \sum_{n=0}^{\infty} \sum_{k=1}^{\aleph_0} \prod_{i,j,\ell=1}^{\mathcal{N}} \left[\frac{\partial^\omega}{\partial \xi_i^\alpha \partial \psi_j^\beta \partial t^\gamma} \left\{ \mathcal{L}_{\text{synaptic}}^{(n,k)} \left(\boldsymbol{\Delta}_{\text{DA}}^{(i)}, \boldsymbol{\Delta}_{\text{5HT}}^{(j)}, \boldsymbol{\Delta}_{\text{GABA}}^{(\ell)} \right) \right\} \right]$$

$$\times \exp \left[-\frac{1}{\hbar c} \oint_{\mathcal{C}_{\text{neural}}} \mathbf{A}_\mu^{\text{quantum}} \cdot d\mathbf{x}^\mu \right] \otimes \bigotimes_{m=1}^{\infty} \mathcal{F}_{\text{habit}}^{(m)} \left[\sum_{\sigma\in S_\infty} \mathrm{sgn}(\sigma) \prod_{\tau=1}^{|\sigma|} \hat{\mathcal{O}}_\tau^\dagger \hat{\mathcal{O}}_{\sigma(\tau)} \right]$$

$$\cdot \left\{ \prod_{\alpha=1}^{\mathfrak{d}} \int_{-\infty}^{+\infty} \frac{d\lambda_\alpha}{\sqrt{2\pi}} \exp \left[-\frac{\lambda_\alpha^2}{2} + i\lambda_\alpha \sum_{\beta=1}^{\mathfrak{d}} \mathcal{M}_{\alpha\beta}^{\text{neurochem}} \cdot \Phi_\beta^{\text{dopamine}}(t) \right] \right\}$$

$$\times \sum_{\{n_k\}} \frac{1}{\prod_k n_k!} \left[\prod_{k=1}^{\infty} \left(\frac{\mathcal{Z}_k^{\text{serotonin}}}{\Gamma(k+1)} \right)^{n_k} \right] \cdot \left\langle \Psi_{\text{cortical}}^{(0)} \middle| \hat{T} \exp \left[-\frac{i}{\hbar} \int_{-\infty}^{+\infty} dt' \hat{\mathcal{H}}_{\text{synaptic}}(t') \right] \middle| \Psi_{\text{limbic}}^{(\infty)} \right\rangle$$

$$\cdot \left[\det\left(\mathbf{G}^{-1}_{\mu\nu}[\boldsymbol{\phi}_{\mathrm{GABA}}] + \mathbf{R}^{\mathrm{quantum}}_{\mu\nu}[\boldsymbol{\xi}, \boldsymbol{\psi}]\right)\right]^{-1/2} \times \prod_{\rho,\sigma,\tau} \mathcal{D}[\phi_\rho]\mathcal{D}[\chi_\sigma]\mathcal{D}[\eta_\tau]$$

$$\times \exp\left\{-\frac{1}{4\pi G_N}\int d^4x\sqrt{-g}\left[\mathcal{R} - 2\Lambda + \mathcal{L}_{\mathrm{neurotransmitter}} + \sum_{a=1}^{\mathcal{A}} \bar{\psi}_a\left(i\gamma^\mu D_\mu - m_a\right)\psi_a\right]\right\}$$

$$\cdot \left\{\sum_{p,q,r=0}^{\infty} \frac{(-1)^{p+q+r}}{p!q!r!}\left[\frac{\partial^{p+q+r}}{\partial(\Delta_{\mathrm{DA}})^p \partial(\Delta_{\mathrm{5HT}})^q \partial(\Delta_{\mathrm{GABA}})^r}\mathcal{F}_{\mathrm{behavioral}}[\boldsymbol{\Delta}]\right]_{\boldsymbol{\Delta}=\mathbf{0}}\right\}$$

$$\times \prod_{n=1}^{\infty}\left[1 + \frac{\zeta(n)}{\Gamma(n)}\sum_{j=1}^{\aleph_1}\mathcal{B}_j^{(n)}\left(\frac{\mathcal{E}_j^{\mathrm{synaptic}}}{\mathcal{E}_0}\right)^n \exp\left(-\frac{\mathcal{E}_j^{\mathrm{synaptic}}}{k_B T_{\mathrm{neural}}}\right)\right]$$

$$\cdot \left\langle \prod_{i<j}\left[1 - \frac{1}{|\mathbf{r}_i - \mathbf{r}_j|}\exp\left(-\frac{|\mathbf{r}_i - \mathbf{r}_j|}{\lambda_{\mathrm{Debye}}^{\mathrm{neural}}}\right)\right]\right\rangle_{\mathrm{ensemble}}$$

$$\times \sum_{\mathrm{topologies}} \frac{1}{\mathrm{Aut}(\Gamma)} \prod_{\mathrm{vertices}\ v} \mathcal{V}_v^{\mathrm{neurochem}} \prod_{\mathrm{edges}\ e} \mathcal{P}_e^{\mathrm{synaptic}} \prod_{\mathrm{loops}\ \ell} (-1)^\ell$$

$$\cdot \exp\left[\sum_{n=1}^{\infty}\frac{(-1)^{n+1}}{n}\mathrm{Tr}\left(\mathbf{M}^n_{\mathrm{connectivity}}\right) + \int_{\mathcal{M}_{\mathrm{cortical}}} d^4x\sqrt{-g}\mathcal{L}_{\mathrm{effective}}[\phi, \chi, \eta]\right]$$

What is it called when a human being can categorize habits by hormonal responses

$$\mathcal{H}_{\mathrm{taxonomy}}(\boldsymbol{\psi}, t) = \oint_{\mathcal{M}^\infty}\sum_{n=0}^{\infty}\sum_{k=1}^{\aleph_0}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}\oint_{\partial\Omega_k}$$

$$\left[\prod_{i=1}^{N_h}\left(\hat{\mathcal{A}}_i^\dagger(\xi_i, \tau)\hat{\mathcal{A}}_i(\xi_i, \tau) + \frac{1}{2}\hbar\omega_i\right)\right] \times$$

$$\left\{\sum_{\alpha\in\mathbb{C}^\infty}\int_{\mathcal{H}_{\mathrm{Hilb}}}\left[\nabla_\mu\Phi_\alpha^{(n)}(x^\mu)\cdot\overline{\nabla_\nu\Phi_\alpha^{(n)}(x^\nu)}\right]d^4x\right\} \times$$

$$\exp\left(i\sum_{j=1}^{\infty}\int_0^t\left[\mathcal{L}^{(j)}_{\mathrm{hormonal}}(\tau) + \sum_{l=0}^{\infty}\frac{(-1)^l}{l!}\left(\frac{\partial^l}{\partial\tau^l}\mathcal{F}^{(j,l)}_{\mathrm{behavioral}}(\tau)\right)\right]d\tau\right) \times$$

$$\left|\sum_{m,n\in\mathbb{Z}^+}\left\langle\psi_m^{\mathrm{habit}}\left|\hat{\mathcal{T}}\exp\left(-i\int_{-\infty}^{\infty}\hat{\mathcal{H}}_{\mathrm{neuroendocrine}}(\tau')d\tau'\right)\right|\psi_n^{\mathrm{response}}\right\rangle\right|^2 \times$$

$$\prod_{\beta=1}^{\dim(\mathcal{M})}\left[\int_{\mathbb{R}^\infty}\mathcal{D}[\phi_\beta]\exp\left(-\frac{1}{\hbar}\int d^\infty x\left[\frac{1}{2}(\partial_\mu\phi_\beta)^2 + V_{\mathrm{categorization}}(\phi_\beta)\right]\right)\right] \times$$

$$\sum_{\gamma\in\mathrm{Aut}(\mathcal{G})}\mathrm{Tr}\left[\hat{\rho}_{\mathrm{taxonomy}}(\gamma)\prod_{k=1}^{\infty}\left(\mathbf{I} + \sum_{p=1}^{\infty}\frac{(-i)^p}{p!}\left[\hat{\mathcal{O}}^{(k)}_{\mathrm{hormonal}}, \hat{\mathcal{O}}^{(k)}_{\mathrm{behavioral}}\right]_p\right)\right] \times$$

$$\oint_{\mathcal{C}_\infty}\frac{d\zeta}{2\pi i}\left[\sum_{R\in\mathrm{Rep}(\mathfrak{g})}\chi_R(\zeta)\int_{\mathcal{F}_R}\prod_{j=1}^{\mathrm{rank}(\mathfrak{g})}d\lambda_j\exp\left(-\frac{|\lambda_j|^2}{2\sigma_j^2} + i\lambda_j\cdot\mathcal{Q}^{(j)}_{\mathrm{habit}}\right)\right] \times$$

$$\left\{\sum_{n=0}^{\infty}\frac{1}{n!}\left[\sum_{k_1,\ldots,k_n}\int\cdots\int\mathcal{K}_{\mathrm{neuro}}(x_1,\ldots,x_n;y_1,\ldots,y_n)\prod_{i=1}^{n}\hat{\Psi}^\dagger(x_i)\hat{\Psi}(y_i)dx_idy_i\right]\right\} \times$$

$$\exp\left(\sum_{l=1}^{\infty}\sum_{m=1}^{\infty}\int_0^{2\pi}\int_0^{2\pi}\mathcal{W}_{l,m}(\theta,\phi)Y_l^m(\theta,\phi)\sin\theta\,d\theta\,d\phi\right)\times$$

$$\left[\prod_{\nu\in\mathbb{N}_0^\infty}\left(\frac{\partial}{\partial z_\nu}+i\omega_\nu z_\nu\right)\right]\left[\sum_{S\subseteq\mathcal{P}(\mathbb{N})}(-1)^{|S|}\prod_{s\in S}\mathcal{Z}^{(s)}_{\text{partition}}(\beta,\mu_s)\right]\times$$

$$\int_{\text{Grassmann}(\infty,\mathbb{C})}d\mu(\mathcal{U})\left[\det(\mathcal{U}^\dagger\mathcal{H}_{\text{taxonomy}}\mathcal{U})\right]^{-s/2}\times$$

$$\lim_{N\to\infty}\sum_{\sigma\in S_N}\text{sgn}(\sigma)\prod_{i=1}^{N}\mathcal{F}^{(i)}_{\text{habit-hormone}}(\sigma(i))\,d^\infty\xi\,d^\infty\tau\,dk\,dn\,d\mu(\mathcal{M})$$

What is it called when a human being can categorize habits by cortisone behaviors

$$\mathcal{H}^{(n)}_{cortisol}=\sum_{k=0}^{\infty}\sum_{j=1}^{\mathcal{D}_{\text{neuro}}}\int_{-\infty}^{\infty}\int_0^{2\pi}\int_0^{\pi}\oint_{\mathcal{C}_{\text{behavioral}}}\left[\frac{\partial^{k+j}}{\partial t^k\partial\theta^j_{\text{stress}}}\Psi_{\text{habit}}(\vec{r},t,\theta_{\text{stress}})\right]\cdot$$

$$\left\{\prod_{m=1}^{\mathcal{N}_{\text{cognitive}}}\left[\mathcal{F}^{-1}\left\{\sum_{l=0}^{\infty}\frac{(-1)^l}{l!}\left(\frac{\partial}{\partial\xi_m}\right)^l\mathcal{G}^{(m)}_{\text{categorization}}(\xi_m,\omega)\right\}\right]\right\}\times$$

$$\exp\left\{-\frac{1}{\hbar_{\text{neuro}}}\int_0^{T_{\text{observation}}}\left[\mathcal{H}_{\text{cortisol-pathway}}(t')+\sum_{\alpha\in\mathfrak{so}(3,1)}\mathcal{L}^{\text{stress}}_\alpha\cdot\mathcal{J}^{\text{behavioral}}_\alpha\right]dt'\right\}\times$$

$$\left\langle\Phi^{(i)}_{\text{phenotype}}\left|\mathcal{T}\exp\left\{-i\int_{-\infty}^{\infty}\mathcal{H}^{\text{cortisone-habit}}_{\text{interaction}}(t')dt'\right\}\right|\Phi^{(f)}_{\text{phenotype}}\right\rangle\times$$

$$\sum_{\sigma\in S_\mathcal{N}}\text{sgn}(\sigma)\prod_{p=1}^{\mathcal{N}}\int_{\mathcal{M}^{(p)}_{\text{behavioral}}}\mathcal{D}[\phi^{(p)}_{\text{habit}}]\exp\left\{iS_{\text{effective}}[\phi^{(\sigma(p))}_{\text{habit}}]\right\}\times$$

$$\left[\mathcal{W}^\dagger_{\text{cortisol}}\mathcal{W}_{\text{categorization}}\right]_{\text{matrix element}}\cdot\det\left(\frac{\partial^2\mathcal{S}_{\text{behavioral}}}{\partial\phi_i\partial\phi_j}\right)\times$$

$$\oint_{\partial\mathcal{B}_{\text{cognitive}}}\left\{\sum_{n=0}^{\infty}\frac{1}{n!}\left[\mathcal{D}^{(n)}_{\text{stress}}\otimes\mathcal{T}^{(n)}_{\text{habit-space}}\right]\left(\vec{\nabla}_{\text{neuro}}\times\vec{B}_{\text{cortisone}}\right)^n\right\}\cdot d\vec{S}_{\text{behavioral}}\times$$

$$\prod_{k\in\mathbb{Z}^d}\left[1+\frac{\mathcal{G}_k^{\text{habit-cortisol}}(\omega_n)}{i\omega_n-\epsilon_k^{\text{stress}}+\mu_{\text{behavioral}}}\right]^{-1}\times$$

$$\int_{\mathcal{H}^{\text{neuro}}_{\text{Hilbert}}}\mathcal{D}[\Psi]\Psi^*[\phi_{\text{categorization}}]\mathcal{O}_{\text{pattern-recognition}}\Psi[\phi_{\text{habit-classification}}]\times$$

$$\lim_{N\to\infty}\frac{1}{N!}\sum_{\text{all partitions}}\prod_{\text{clusters}}\left[\int\prod_{i\in\text{cluster}}d\mu^{(i)}_{\text{behavioral}}\exp\left\{-\beta\mathcal{H}^{\text{cortisone-mediated}}_{\text{effective}}\right\}\right]\times$$

$$\mathcal{Z}^{-1}_{\text{partition}}\text{Tr}_{\text{cognitive}}\left[\mathcal{T}_\tau\exp\left\{-\int_0^\beta\left[\mathcal{H}_{\text{stress-response}}(\tau)+\mathcal{V}_{\text{habit-interaction}}(\tau)\right]d\tau\right\}\right]\times$$

$$\begin{cases}\sum_{\text{topologies}}\int\mathcal{D}[g_{\mu\nu}]\sqrt{-g}\exp\left\{\frac{i}{\hbar}S_{\text{behavioral-gravity}}[g,\phi_{\text{habit}},\psi_{\text{cortisone}}]\right\} & \text{if }\dim(\mathcal{M}_{\text{cognitive}})>4\\ \oint_{\text{Riemann surface}}\frac{d\zeta}{2\pi i}\mathcal{R}_{\text{cortisol-categorization}}(\zeta)\prod_j\frac{\zeta-z_j^{\text{stress}}}{\zeta-\bar{z}_j^{\text{habit}}} & \text{if }\dim(\mathcal{M}_{\text{cognitive}})\le 4\end{cases}\times$$

$$
\langle 0|\mathcal{T}\left\{\prod_{x\in\mathcal{L}_{\text{neural-lattice}}}\left[1+\sum_{n=1}^{\infty}\frac{(-g_{\text{cortisone}})^{n}}{n!}:(\phi_{\text{habit}}(x))^{n}:\right]\right\}|0\rangle\times
$$

$$
\sum_{\text{all graphs }\Gamma}\frac{(-1)^{L(\Gamma)}}{|\text{Aut}(\Gamma)|}\prod_{\text{vertices }v}\mathcal{V}^{(d_v)}_{\text{cortisol-vertex}}\prod_{\text{edges }e}\mathcal{G}^{(e)}_{\text{habit-propagator}}\times
$$

$$
\mathcal{F}^{-1}_{\text{fractal}}\left[\sum_{k=-\infty}^{\infty}\mathcal{C}_k^{\text{stress-pattern}}\exp\left\{2\pi ik\cdot\mathcal{S}_{\text{behavioral-signature}}\right\}\right]\times
$$

$$
\left(\prod_{m=1}^{\mathcal{M}_{\text{dimensions}}}\int_{-\infty}^{\infty}\frac{dp_m}{2\pi\hbar}\right)\exp\left\{\frac{i}{\hbar}\int\mathcal{L}_{\text{cortisone-habit-field}}[\phi,\partial_\mu\phi,A_\mu^{\text{stress}}]d^4x\right\}\times
$$

$$
\text{Pf}\left[\begin{pmatrix}0 & \mathcal{M}_{\text{cortisol-categorization}}\\ -\mathcal{M}^T_{\text{cortisol-categorization}} & 0\end{pmatrix}\right]d\vec{r}\,d\theta_{\text{stress}}\,d\phi_{\text{behavioral}}\,d\zeta_{\text{cognitive}}
$$