Page numbers: bold = table, italics = figure.

```
ability to, 47, 48 see whole
                                                     ascending from abstract to concrete, 20-22, 23,
abstract and concrete (dialectics), 20-22
                                                           24, 25, 27, 29, 74, 76, 78
Ackoff, R. L., 59
                                                        Anne case study, 104, 104, 105, 107, 108
action-level concepts, 18
                                                        core of expansive learning, 140
activities (Rosch), 38
                                                        dialectical theory, 79, 140
activity
                                                        embodied germ cell at work, 89
  concepts, 19
                                                        Finnish Housing First 2.0, 175-177
  oriented towards object, 18
                                                        formation of theoretical concepts, 30
  unit of analysis, 18
                                                        formative interventions, 32
activity areas, 49
                                                        germ cell, 79-81
activity in lead (collective concept formation, qv), 139
                                                        Herttoniemi Food Cooperative (qv) case, 146
activity systems, 18, 19, 30, 39
                                                        long haul, 175-177
activity theory, 35
                                                        possibilities of innovation, 30
  most important philosopher (Ilyenkov), 20
                                                        spiral-like logic, 154
activity theory (four generations), 17-20
                                                        standing up from chair, 6
  1st generation, 18
                                                        stepwise emergence of theoretical concepts
  2nd generation, 18
                                                           (Davydov), 141
                                                     ascending from abstract to concrete: model
  3rd generation, 18-19
  4th generation, 19
                                                           implementation (Anne case study), 93-101
activity-level concepts, 18, 30
                                                        trail 1: straightening back and gaining better
activity-theoretical perspective
                                                           posture, 94
  "situations" versus "activities," 38
                                                        trail 2: taking regular walks, 94
actual-empirical analysis, 26
                                                        trail 3: using sit-to-stand as diagnostic aid, 97
                                                        trail 4: teaching relatives to do mobility
adhocracy: definition, 150
agency, 16, 71, 78, 109, 114
                                                           exercises, 97
Alberta (Canada): homelessness issue, 169
                                                        trail 5: setting table, 98
Amit, R., 35
                                                        trail 6: being in better mood, taking care of
Anderson, I., 51
                                                           oneself, 98
Anderson-Baron, J. T., 169
                                                     Assertive Community Treatment (ACT) team,
anomalies, 44, 45
  turned into "categories," 45
                                                     autonomy, 85, 107, 145
anticipatory directionality (Fogel), 112
appropriate spiraling (Cussins), 9, 140
                                                     Baker, T., 159
                                                     Bal, A.: in footnote at page \rightarrow, 66
archetypes, 34
artifacts, 105, 107, 110, 184
                                                     Bartunek, J. M., 34
  planned use, 128
                                                     Bazerman, C., xiii, 57
  use (critical encounters between HCWs and
                                                     Beckett, R. C., 35
     elderly clients), 116-124
                                                     Beghetto, C. A., 154
  use (relationship with volitional action), 119
                                                     Begriff (German, 'concept'), 1
```

blackboxing, 9	classification concepts, 6, 57, 183
blood pressure, 97, 119, 122, 126, 127, 128, 135	epistemic potential, 41
Blunden, A.: in footnote, 20	classification systems, 43, 44
bodily movements, 79, 80	clinical pathways, 50
boomerang flu, 138	clock, 17
Bothello, J., 35–36	co-configuration, 68, 69, 75
boundary crossing (Engeström et al.), 112	co-creation pathways, 57
boundary problem, 124	thought of as 'plans', 58
definition, 112	cognition
Bowker, G., 2, 43, 44	"culturally situated," 3
Bratus, B. S., 112	radically distributed societal and dialogical
Brock, D. M., 34	nature, 11
Brook, C., 29	cognitive objects, 8
Brooks, R. A., 37, 41	cognitive trails (Cussins), 8–10, 105, 140
,, 5,,, 1	emergence of concepts as result of density and
capitalism, 20, 27, 28	stabilization of, 142
sustainable alternatives, xiv	gaps in theory, 141
care pathways, 50	networks, 9
definition (Schrijvers et al.), 50	powerful foundation, 141
prescriptive and normative, 57	Cole, M., 2
thought of as "scripts," 58	Cole, R. E., 179
Carroll, L.: Hunting of Snark, 151	collective activity, 30, 77
Casas-Cortés, M. I., 36	collective concept formation, 32, 34, 114, 184
categories, 43–49	creation dynamics, 140
emergence, 44	essence, 83
perspectives, 44	evolution versus design, 178–181
categorization research: challenges (Delmestri	long process, 139
et al.), 43	most important challenge, 153
categorization: prototype theory (Rosch), 38	collective concept formation as creation at work,
category change, category formation: anomalies	138–155
as generative mechanisms, 44	concept formation as movement in space
causal loop diagramming, 59	(working hypothesis), 140–143
Center for Research on Activity, Development	concept formation with name in lead, 149–152
and Learning (CRADLE), xiii	concept formation with named partial
Chamberlain, C., 51	solutions in lead, 146–149
change action, 180	concept formation with practice in lead,
definition, 112	152–153
Change Laboratories, 32, 181	food cooperative case, 146–149
greenhouse vegetable producers, 60–66	home care case, 152–153
homelessness (city-level, Tampere, 2019),	library case, 149–152
166–167	three cases (contradictions), 143–146
homelessness (eradication in Finland),	Collins, D., 169
157	commodity: germ cell of capitalism (Marx), 20,
homelessness action plan (2020), 164–165	2.7
homelessness pathways, 52-57	communities, xiii, 13, 24, 36, 44, 159
knotworking in library, 66–76, 150, 180, 182	community of practice, 13, 44
surgical operating unit, 45–49	concept
Chartres cathedral, 37–38	"concrete abstraction" (Davydov), 21
chores, See daily chores	constant movement (Cussins), 10
Cicourel, A., 2	dialectical perspective, 3, 21
Clark, A., 80	dual meaning, 1
classification, 43–49	English word related to "conceiving," 1
definition (Bowker and Star), 43	expressed in movement and action, 21
definition (Merriam-Webster), 43	formal-logical understanding, 20
divide, define, fill, 49	nature (collective and evolving), 2, 3
, deinie, iii, ¬/	

	C 1
concept (cont.)	first lessons, 6, 8–14
origin, 22	concepts formed in wild
qualitativelydifferent kinds, 15, 30	confrontation, contestation, negotiation,
use in studies of management fashions, 35	hybridization, 30
view of Greeno and van de Sande, 106	polyvalent, debated, dynamic, 30
concept formation, xiii, 6, 138	conceptual blending, 12
Anne case study, 86–108	conceptual change, 33, 138
dialectical theory, 105	conceptual combination, 138
dimensions, 4	conceptual history, 35
everyday work, 109–137	conceptual instrumentality, 77
everyday work (conclusion), 134–137	conceptual structure, 11
formative interventions, 181	conceptualization efforts, 111, 116, 131, 135,
four fields, 5	136, 137
historical sociology (Somers), 35	connected to restrictive and expansive artifact
horizontal dimension, 15	uses, 122
image, 36	definition, 113
interplay with double stimulation, 7	five key types, 137
lengthy process, 141	mobility-oriented, 122
long haul (homelessness), 156–177	relationship with artifact uses, 122
messy worlds of everyday life, 2, 3	conceptualization: first task (systems models), 59
new study agenda proposed, 7	conflict of motives, 17, 27, 71, 89, 98, 103, 111,
organizations, 33	113, 114, 125, 126, 129, 131
pedagogical challenge, 22–25	appears in two forms, 110
reflective, 101	articulation (Anne case study), 90–92
transcendent process (Cussins), 10	articulation data, 90
uncertainty, change, and future-orientation,	critical encounters, 112
13	surface between key actors in work activity,
work activity (Bay of Bengal fishing boats),	109
39–42	trigger for double stimulation processes, 109
Concept Formation and Volition in	contradictions, 12, 13, 19, 27, 31, 112, 143-146,
Collaborative Work (research project), xiii	162, <i>163, 165</i> , 181, 184
concept formation in wild	control, 46
advice for interventionist researchers, 181	cracks between services, 162, 165, 173
characteristics, 13	creativity, 138
collective creation, 5	Big-C versus little-c, 154, 155
consequences, 178–184	Pro-c, 154
educational implications, 183–184	work-related (new angle), 155
first lessons, 14	critical auxiliary artifact, 63
fluid, multifaceted, 36	critical encounters
guiding study ideas, 30–31	conceptual model, 110
identification as research challenge, 33	conflict of motives, 112
intertwined with generation of transformative	definition, 111
agency, 31	Engeström, 110
movement along two dimensions, 143	explanatory potential, 137
processes, 7	"not linear events," 111
Concept Formation in Wild	structure, 111
book focus, 5, 22	target of two actors, 112, 113, 114
book point of view, 32	use of artifacts (incidental versus planned),
meaning of "in wild," 6	116, 119, 135
concept formation in wild (locating), 1-7	use of artifacts (restrictive versus expansive),
putting concept formation in wild on map,	116, 117, 119, 122, 135
3-6	critical encounters between home care workers
sources of inspiration and insight, 2-3	and elderly clients, 114–137
concept formation in wild (theorizing -)	artifacts (incidental versus planned use), 117
cultural-historical activity theory, 6, 15-32	artifacts (restrictive and expansive use), 117

artifact-use (overview), 116–124	debate, 141
home care visits (five profiles), 116	decontextualization, 54
methods of analysis, 115–116	Deerfoot (Nopsajalka) mobile homelessness
setting and data, 115	service, 166–177
volitional action connected to restrictive and	Deerfoot novels (Ellis), 166
expansive uses of artifacts, 122	degrowth, See expansive degrowth
critical encounters between home care workers	Deguine, J. P., 60
and elderly clients (four case studies),	deliberate non-action (Brook), 29
124–134	Delmestri, G., 44
case (1), 124–126, 135, 136	diagnosis, 66, 76
case (2), 126–128, 136	Diagnostic and Statistical Manual (DSM-5), 44
case (2) summary of components, 128	dialectics, 6, 30, 34
case (3), 129, 133, 136	abstract and concrete, 20-22
case (3): taking out trash bag together, 130	concept formation as pedagogical challenge,
case (4), 131–134, 136	22-25
case (4) analysis, 134	concepts as theoretical generalizations, 107
different ways of using artifacts, 135	germ cell concept, 158
expansive uses of artifacts (cases 3 and 4),	dialogical triad, 10
129–134	distributed cognition, 13
restrictive uses of artifacts (cases 1 and 2),	"doing for" versus "doing together," 131
124-128	domesticated mind (Goody), 6
criticism of past failures, 54	double stimulation, 15–17, 31, 98, 108, 147
cultural-historical activity theory, 3, 6, 7, 14,	construction and functioning (lengthy iterative
15-32, 34	process), 131, 133, 136
ascending from abstract to concrete, 20–22	formative interventions, 32
concept formation as pedagogical challenge,	"idea of central importance," 16
22–25	interplay with concept formation, 7
double stimulation, 15–17 everyday and scientific concepts, 15	phase structure model (Sannino), 16, 109,
formative interventions, 31–32	true test, 17
four generations of activity theory, 17–20	double stimulation and concept formation in
from classroom into wild, 23–27	everyday work, 109–137
from dichotomy to diversity, 27–32	conclusion, 134–137
germ cell, 27–29	setting and data, 114–115
guiding ideas for study of concept formation	theoretical framework, 111–114
in wild, 30–31	Duijn, S. van, 165
culturally-novel concepts, 5, 17, 26	Dunlop, T., 157
collective creation, 5	Durand, R., 43
Cussins, A., 11, 12, 105, 140-142, 154	dwelling: apt characterization, 42
theory of cognitive trails, 8-10, 140, 142	
	ego-alter-object: dynamic semiotic triangle, 10
daily chores, 82, 87–88 , 91 , 131, 132, 145	elderly people, 78–108
integration of mobility exercises, 81, 83, 103,	critical encounters with HCWs, 114–137
107, 114, 122, 131, 133, 146	safety versus autonomy, 84
Davydov, V. V., 2, 15, 21, 25, 30, 78, 80,	embedded librarianship concept, 150
140–142, 141, 154	embodied cognition, 8, 79, 80, 140
concept formation as pedagogical challenge,	embodied germ cell, 78–108
22-25	embodied social interaction, 81, 105
concept formation viewed as vertical process,	embodied thinking and acting, 81
I4I	emerging concepts, 75, 137, 142, 146
learning activity (ideal sequence), 25, 26	practical enactment but only partial naming
powerful foundation for further work, 141	and stabilization, 29
theory of formation of theoretical concepts, 30 Types of Generalization in Instruction (1990	textual definition versus practical enactment (gap/discrepancy), 139
[1972]), 2, 22, 23	empirical concepts, 2, 23, 30, 32
[17/2]/, 2, 22, 23	empirical collecpts, 2, 23, 30, 32

energy efficiency, 158 "motherhood concept" (Dunlop), 157 Engeström, Y., 83, 108, 115, 154, 167 activity theory (fourth generation), 19 environmentalism, 35, 36 evolution as transnational process, 35 envisioning, 74 form of transformative agency, 74 epistemic actions: ideal-typical sequence, 80 epistemic potential, 33 classification concepts, 49 germ cell concepts, 76 process concepts, 57–58 prototype concepts, 41–42 systems concepts, 66 escorted transfer, 172, 173–177 elements, 174 service integration, 173 Evans, J., 159 everyday cognition, 5 everyday concepts, 15, 23 everyday thinking, 22	Finland: Ministry of Environment, 167 Finland: Ministry of Social Affairs, 167 Finland: National Audit Office, 106 Finnish Housing First (FHF), 160, 162, See also Housing First basic principle, 169 contradictions between substances and home (solution), 165 germ cell concept, 162–164 key differences from Pathways Housing First, 161–162 principle, 164 Finnish Housing First 2.0, 7, 181, 183, 184 ascending from abstract to concrete (long haul), 175–177 germ cell, 167, 173–175 new contradiction (solution), 173 new contradiction (to be faced), 168–172 Finnish Housing First 2.0 (winding road), 164–168 foundational principle (germ cell) not yet formulated, 165
"inconvenient object of logical analysis" (Ilyenkov), 22	key steps, <i>169</i> six sections (36 recommended actions), 165
everyday work: double stimulation and concept formation, 109–137 evolution and design, 178–181 fluid interplay and hybridization, 179	first stimulus (mirror data), 71, 113, 114 Knotworking in Library project, 69 fishing boats, 6, 39–42 Fitzpatrick, S., 51
germ cell concepts, 180 expansive concepts: building -, 78–108	Fogel, A., 112 food cooperative, <i>See</i> Herttoniemi Food
expansive cycle, 26, 80	Cooperative
expansive degrowth, 7, 29, 66, 146, 147, 153, 175 strong evolution, weak design, 179 expansive learning, 3, 27, 28, 154, 184 epistemic actions (typical sequence of seven),	formal concepts (Greeno), 3, 4, 138 formative interventions, xiv, 7, 31–32, 108 epistemological and methodological principles, 32
25–26	in concept formation, 181
expansion of Davydov's work, 25 generates tangible solutions, 147	frailty, 84, 94, 108, 145, 181 biological basis, 82
leads to integrative conceptualizations,	clinical features, 82
147	Frasergunj (Bay of Bengal), 39, 42
	fishing boats, 40
Faces: Stories of Homelessness (Pyyvaara and	functional concepts, 6, 111, 113, 139
Timonen, 2017), 52 facial expressions, 103, 105	approaches and attempts, 34–37 basic types (identification), 33
falls, 82, 107, 129, 145	characteristics, 76
family caregiver (Finnish context), 132	definition, 33
Fauconnier, G., 37	formation, 34
fear, 46, 92	future research, 183
FeedNavigator, 69, 70, 71, 74	future-making devices, 183
Finland, 159 national program for prevention of	Greeno, 3 interplay, 181–183
homelessness (2016–2019), 156	most demanding but most impactful type
social welfare services (siloed character), 162, 165	(germ cells), 162
success in reducing homelessness (2008-),	organized productive activities, 33-77
156, 161	pyramid, 182

functional concepts (types)	Helsinki Health Centre Strategy and Balanced
classifications and categories, 43–49	Score Card document for 2011–2013, 106
germ cell concepts, 66–76	Herttoniemi Food Cooperative, 66, 140,
process concepts, 58–74	143-144, 181
prototype concepts, 37-42	activity systems (developmental
systems concepts, 59–66	contradictions), 144
future-orientation, 13, 54, 115, 116, 139, 184	concept formation with named partial
	solutions in lead, 146–149, 153
germ cell, 21, 24, 30, 140, 146, 153	discrepancy between income and expenditure,
ascending from abstract to concrete, 79-81	148
characteristics, 27	illustration of "germ cell" idea, 27–30
core of concept (dialectical perspective), 158	limiting number of members, 148, 149
criteria, 84	membership turnover problem, 147
crucial role (ascent from abstract to concrete),	movement towards expansive degrowth
27, 80	concept, 149
expansive degrowth (qv), 147	hierarchy, 74, 182
Finnish Housing First, 162–164	historical-genetic analysis: purpose, 26
Finnish Housing First 2.0, 167, 173–175	historicity, 181
formation, 89	Holzkamp, K.: in footnote, 182
formation (Anne case study), 92	home care, 6, 110, 140, 145–146, 180, 181
formation data, 93	activity systems (developmental
Herttoniemi Food Cooperative, 27–29	contradictions), 146
multi-directional expansion, 101	concept formation with practice in lead,
standing up from chair, 124	152-153
standing up from chair (home care), 81-85	cost-efficiency versus long-term effectiveness,
starting point of theoretical concept, 27	145
germ cell concepts, 6, 7, 66–76, 172, 175, 181, 183	mobility challenge, 81–85
epistemic potential, 76	paradox, 82
evolution and design, 180	physical mobility, 78–108
germ cell model	sustainable mobility concept, 154
examination (Anne case study), 92	home-care workers (HCWs), 107, 145
examination data, 92	critical encounters with elderly clients, 114-137
German Democratic Republic, 2	high turnover, 86
gestures, 80, 89, 103, 105, 115	Tina (Anne case study), 89, 90–103, 104, 105,
Goodwin, Candy, 2	106, 108
Goodwin, Chuck, 2	homelessness, 7
Goody, J., 6	concept formation over long haul, 156–177
Google, 33, 71	permanence versus mobility, 170
gothic cathedrals, 37–38	prevalence, 156
greenhouse vegetable producers (seasonal versus	security versus independence, 170
year-round -), 60–66	traditional approach ('staircase model'), 156,
Greeno, J. G., xiii, 2, 3, 33, 106, 138	163
"formal concepts," 33	homelessness action plan (Finland, 2020),
Greenstein, D., 66–67	164–165
Griesemer, J. R., 112	aim, 165
Gromyko, Y., 24	"possibility" (keyword), 165
	"together" (keyword), 165
Hannan, M. T., 36	homelessness pathways, 50-58, 183
HCWs, See home-care workers	categorization (examples), 51
heedful interrelating (Weick and Roberts), 42	change laboratory, 52–57
Hegel, G. W. F., 11, 83	definition (Anderson and Tulloch), 51
Helsinki, 27, 52, <i>See also</i> University of Helsinki	descriptive (rather than normative), 57
library	notational template, 53
Helsinki City municipal home care, See home	representations, 55
care	thought of as "stories," 58

homelessness work	Johnston, E. R., 44
new contradiction, 168–172	Jokinen, E., 167
permanence versus mobility, 170	Joutsenlahti, S., 170
hospice, 90, 92	Jutel, A., 45
Housing First, See also Pathways Housing First	Jyväskylä, 173, 175, 176
fundamental step, 159	Nopsajalka model, 167–168, 171–172
inception of concept (early 1990s), 156	Nopsajalka model (transformation), 172
"motherhood concept," 158	
Housing First 2.0, 158	Kaakinen, J., 167
concept formation process "lengthy and far	Kajamaa, A., xiii, 115
from linear," 157	Kalevala (Finnish national epic), 151
emerging concept, 157	Karppinen, J., 170
link, 157	Kaugman, J. C., 154
moving towards stronger design and stronger	knot, 73, 74
evolution, 180	definition (Engeström), 150
Hunter, B., 58	potential germ cell, 151
Hutchins, E., xiii, 2, 8, 12, 80	knotworking, 6, 7, 149–152, 175, 182
Cognition in Wild (1995), 5–6	characteristics, 150
evolution and design, 178–179	definition, 68
material anchors, 11–12, 16	germ cell concept (University of Helsinki
hybridization, 30, 141, 179	library), 76
, , , , , , , , , , , , , , , , , , , ,	movement towards, 152
identity, 18, 46, 47	use of term (frequency), 71
ideologies, 10, 50, 141	Knotworking in Library project, 66-76, 150
idol of stability (Toulmin), 2	weak evolution, strong design, 180
illness, 2, 78, 88 , 91	Kostiainen, E., 51
Ilyenkov, E. V., 23, 30, 78, 148	,, y-
dialectics of abstract and concrete, 20–22	Lave, J., 2
"general notion" (differentiated from	learning actions, 79
"concept"), 20, 23	loops, repetitions, gaps, 26
"Robinson Crusoe epistemology," 20	sequence of six, 25
implementation, 80, 89, 157	learning laboratories, 59
Indigenous Energy Justice (IEJ), 36	learning processes, 25, 28
indigenous social movements, 36	learning: central aspect of all activity, 20
Ingold, T., 42, 105	Leont'ev, A. N., 30, 83, 138, 153, 175, 184
in footnote, 8	activity theory (second generation), 18
institutional paths, 36	"motive goal" notion, 18
four mechanisms of lateral interaction, 35	Lévi-Strauss, C.: pensée sauvage, 6
institutions, 1, 5, 6, 10, 68, 141, 178	
integrated pest management (IPM), 6, 60, 66	Lindgren, A., 138, 139 linear residential treatment (LRT), 156, 163
interactive physical enactment, 105	Linell, P., 11
	Lishin, O. V., 112
interactive physical environment, 101–103 interconnected instrumentality, 77	Löwy, I.: "strength of loose concepts," 37
internet, 64, 67, 71, 72, 73, 90 interpretive scheme, 34, 35	, , , , , , , , , , , , , , , , , , ,
interpretive scrience, 34, 33	
	Marchand, T. H., 42
interruptions, 44, 45, 171, 174	Marchand, T. H., 42 Marková, I., xiii, 8, 17
interruptions, 44, 45, 171, 174 intervention research: methodological challenges,	Marchand, T. H., 42 Marková, I., xiii, 8, 17 social representations, 10–11
interruptions, 44, 45, 171, 174 intervention research: methodological challenges, 108	Marchand, T. H., 42 Marková, I., xiii, 8, 17 social representations, 10–11 Marx, K., 20
interruptions, 44, 45, 171, 174 intervention research: methodological challenges, 108 interventionist researchers, 181	Marchand, T. H., 42 Marková, I., xiii, 8, 17 social representations, 10–11 Marx, K., 20 Marxism, 3
interruptions, 44, 45, 171, 174 intervention research: methodological challenges, 108 interventionist researchers, 181 interventions, 26, 68, 157, 171, 172, <i>See also</i>	Marchand, T. H., 42 Marková, I., xiii, 8, 17 social representations, 10–11 Marx, K., 20 Marxism, 3 material anchors (Hutchins), 11–12, 16, 80
interruptions, 44, 45, 171, 174 intervention research: methodological challenges, 108 interventionist researchers, 181 interventions, 26, 68, 157, 171, 172, See also formative interventions	Marchand, T. H., 42 Marková, I., xiii, 8, 17 social representations, 10–11 Marx, K., 20 Marxism, 3 material anchors (Hutchins), 11–12, 16, 80 Mead, G. H., 177–178, 181
interruptions, 44, 45, 171, 174 intervention research: methodological challenges, 108 interventionist researchers, 181 interventions, 26, 68, 157, 171, 172, <i>See also</i>	Marchand, T. H., 42 Marková, I., xiii, 8, 17 social representations, 10–11 Marx, K., 20 Marxism, 3 material anchors (Hutchins), 11–12, 16, 80 Mead, G. H., 177–178, 181 media, 3, 43, 47
interruptions, 44, 45, 171, 174 intervention research: methodological challenges, 108 interventionist researchers, 181 interventions, 26, 68, 157, 171, 172, See also formative interventions intraventions, 179, 180	Marchand, T. H., 42 Marková, I., xiii, 8, 17 social representations, 10–11 Marx, K., 20 Marxism, 3 material anchors (Hutchins), 11–12, 16, 80 Mead, G. H., 177–178, 181 media, 3, 43, 47 mediating artifacts, 111, 114, 115, 137
interruptions, 44, 45, 171, 174 intervention research: methodological challenges, 108 interventionist researchers, 181 interventions, 26, 68, 157, 171, 172, See also formative interventions intraventions, 179, 180 Jensen. U. J., 2	Marchand, T. H., 42 Marková, I., xiii, 8, 17 social representations, 10–11 Marx, K., 20 Marxism, 3 material anchors (Hutchins), 11–12, 16, 80 Mead, G. H., 177–178, 181 media, 3, 43, 47 mediating artifacts, 111, 114, 115, 137 performance of volitional actions, 113
interruptions, 44, 45, 171, 174 intervention research: methodological challenges, 108 interventionist researchers, 181 interventions, 26, 68, 157, 171, 172, See also formative interventions intraventions, 179, 180	Marchand, T. H., 42 Marková, I., xiii, 8, 17 social representations, 10–11 Marx, K., 20 Marxism, 3 material anchors (Hutchins), 11–12, 16, 80 Mead, G. H., 177–178, 181 media, 3, 43, 47 mediating artifacts, 111, 114, 115, 137

Mehan, B., 2	one-sided expressions of will, 119, 125, 127
Melville, H.: Moby Dick, 151	one-way lecturing, 74, 75
mental health problems, 156, 163, 166	organization studies, 34
mental models (Senge), 59	Organization Studies (special issue, 2020), 43
Mind, Culture, and Activity (special issue), xiii	organizational activity games (Gromyko), 24
mirror data, 62, 69, 71	organizational archetypes, 34
mobility, 126, 127	organizational categorization, 43
dominant cultural images, 81	three types of action (Durand et al.), 43
home care, 78–108	organizational change effort, 34
mobility agreement, 78, 86, 88 , 89, 105, 106,	organizational environmentalism, 35
110, 114, 116, 145	organizations, 6, 25, 33, 36, 37, 43, 50, 109,
expansive use, 117	112, 139, 155, 157, 182
passim, 119–136	concept formation, 3
mobility challenge: home care, 81-85	ostensive definition, 41
mobility exercise booklet, 83, 117, 122, 124,	Ostrobothnia (Finland), 60
132, 133, 136	
mobility exercises, 78, 115, 127, 153, See also	partial solutions, 146–149
daily chores	pathway concepts: three types, 57
model consolidation, 26	pathway representations, 54–58
model examination, 26, 89	pathways, 50
model implementation, 26	Pathways Housing First (PHF), 158–160, 171,
model-based reasoning (Nersessian), 12–13	See also Y-Foundation
modeling, 26, 30, 80, 89	contradictions between substances and home,
modes of collaboration (Engeström et al.), 112	163
Moscovici, S., 8	key differences from Finnish Housing First,
semiotic triangle, 10, 11	161–162
social representations, 10–11	original model (New York) of Housing First,
motherhood concept, 157	158
notion "too vague," 158	principles, 158
Mukhopadhyay, S., xiii, 39	scattered-site housing, 159, 160
multimodal concepts: versus single-mode	perspective-dependence (PD): key concept
representations, 80	(Cussins), 8–10
	perspective-dependence ratio, 8, 9, 140, 154
name in lead (collective concept formation), 139,	perspective-independence, 8
149–152	pest management (whitefly), 60–66
narratives, 50	physical actions, 41, 80, 90, 115, 119, 122, 133
need state (Bratus and Lishin), 112, 137	physical exercises, 81, 83, 105
negotiated knotworking (Engeström), 174	plans, 50, 58, 119
Nelson, K., 49	Pleace, N., 52
Nersessian, N. J., xiii, 5, 8	possibility knowledge (Engeström), 32, 165
model-based reasoning, 12–13	possibilization, 53, 54
"source domain concept," 42	post-traumatic stress disorder (PTSD), 44
network of cooperatives, 147	pragmatic concept: definition, 33
New York, 158	Prinz, J., 80
homelessness (prevalence), 160	problem-solving, 13, 16, 24, 30, 73, 109
Nopsajalka (Deerfoot) mobile homelessness	process concepts, 6, 58–74
service, 166–177	epistemic potential, 57–59
elements, 174	production: experimental aspect (Davydov), 24
Nummijoki, J., xiii, 78, 83, 115, 180	productive activities (functional concepts),
researcher (Anne case study), 89, 90–103, 106,	33-77
108	prototype concepts, 6, 37–42, 181, 183
	Chartres cathedral, 38
object-orientation, 181	epistemic potential, 41–42
objects, 1, 2, 11, 20, 21, 32, 49, 80, 145	primary function, 42
objet trouvé, 113	prototype theory of categorization (Rosch), 38

prototypes definition, 37	Sawyer, R. K.: Explaining Creativity (2012), 138 school instruction, 32
mental experience (Rosch), 38 Pyyvaara, U., 52	Davydov's critique, 23 Schrijvers, G., 50 science: "superior form of human cognition," 24
Querol, M.P., xiii, 60 questioning, 25, 26, 80, 89 first learning action (great importance),	scientific concepts, 5, 15, 23 scientific laboratories, 13 scientific theoretical thought, 22
27	scripts, 50–74, 116, 116 , 117, 119, 125, 126 second stimulus, 7, 63, 66, 71, 73, 75, 98, 110,
Radford, L., 24	113, 114
Rantavuori, J., xiii, 28	function of counting, 128
Rasmussen, E. B., 45	passim, 125–136
real conflict of stimuli, 17, 131	turned into germ cell, 74
realized activity, 138, 153, 175	Segrott, J., 58
recontextualization, 54	Senge, P. M., 59
reflection, 80, 89, 101	service integration, 165, 173
reflective consciousness, 178, 181	service learning, 184
regularity of movement, 126, 131, 133	shared object, 19, 111, 112, 146
rental agreements, 160, 164	situated cognition, 5
representational modality, 7, 142	situations (Rosch), 38
Research Engagement for Sustainable and	snirkels, 138, 139, 150
Equitable Transformations (RESET), xiii,	social housing, 159
157	social interaction, 49, 81, 97, See also embodied
research groups, 149, 150, 151	social interaction
researchers and research groups (Knotworking in	social knowledge theory, 10
Library project), 68–76	social media, 64
resource extraction, 36	social movements, xiii, 3, 22
responsibility, 46, 47, 49, 62, 66, 73, 87 , 110	social representations, 10–11
restaurant script, 50	somatic anchors (for concepts), 80
RISE (Criminal Sanction Agency), 171	Somers, M. R.: historical sociology of concept
Rissanen, P., 165	formation, 35
Roberts, K. H., 42	source domains (Nersessian), 42, 113, 124, 137
Rogalski, J., 33 Rosch, E., 38	stabilization, 7, 11, 140, 142, 151, 153 definition, 9
runaway objects, 19	key concept (Cussins), 8, 9–10
Ryle, G., 3	staircase model, See linear residential treatment
	(LRT)
saattaen vaihdettava, See escorted transfer	standing up from chair, 82, 122, 126, 132
safety, 85, 107, 126, 129, 145	candidate germ cell, 81–85, 103
Salles-Djelic, M. L., 35–36	data and method, 85–90
Sande, C. van de, 106	germ cell of sustainable mobility, 6, 103–105,
Sannino, A., xiii, 16, 17, 108, 109, 112	124, 137, 152, 153, 183
activity theory (fourth generation), 19 change laboratory (homelessness), 52	home-care-visit evidence (2008–2009), 86
leader of RESET research group (Tampere	interactive physical enactment, 101–103, 105
University), 157	internally contradictory germ cell of
mediating artifacts (dynamic sense), 113	sustainable mobility, 84
model (2020) of transformative agency by	longitudinal follow-up and analysis, 86
double stimulation, 16	procedure, 84
professional agency among homelessness	standing up from chair: concept formation (Anne
workers, 167	case study), 86–108
work on TADS, 27	1: articulating conflict of motives, 90-92
Sannino's research group (homelessness), 167,	2: forming germ cell, 92
168, 173, 174, 176	3: examining germ cell model, 92

4: implementing model by ascending to	Moscovici, Marková and social
concrete, 93–101	representations, 10–11
5: reflecting on process and outcomes, 101	Nersessian and model-based reasoning, 12–13
Jaana Nummijoki (researcher), 89, 90–103,	summary, 13–14
106, 108	Timonen, A., 52
Tina (home-care worker), 89, 90–103, 104,	Toulmin, S., 2
105, 106, 108	transformations, 10, 26, 30
Star, S. L., 2, 43, 44, 112	transformative action, 114, 180
statistics, 51, 58, 64, 160	transformative agency, 17, 20, 31, 73, 74, 111,
Sterman, J. D., 59	128
Stewart, J., 41	definition, 112
stories, 50, 58	transformative agency by double stimulation
Strauss, A. L.: in footnote, 66	(TADS), 27
substance use, 156, 162, 163, 166, 170	trust, 89, 166, 170, 172, 176
Suchman, L., 2	Tsemberis, S., 158–163, 171
Sunikka, S., 51	Tulloch, D., 51
surgical operating unit (university hospital in	Turnbull, D.: on Chartres cathedral, 37
Finland), 45–49	Turner, M., 37
organization chart (new), 48	
organization chart (old), 46	unexpected, 49, 70, 165, 177
sustainability, 35, 36	United States, 2, 52, 159
sustainable mobility, 7, 107, 131, 137, <i>154</i> , 175,	homelessness (prevalence 2015–2020), 160
176, 183	unity in diversity, 21, 30
emerging concept, 107, 122	university hospital (transformation of surgical
expansive concept, 146	operating unit), 45–49
germ cell, 6	change laboratory, 45–49
standing up from chair "germ cell action,"	University of Helsinki, xiii
124	University of Helsinki library, 140, 181
strong design, strong evolution, 180	activity systems (developmental
Swain, G., 43	contradictions), 145
systems concepts, 6, 59–66	chain of actions (germ cell concept formation),
systems concepts: epistemic potential, 66	75 change laboratory, 66, 76
Tempera 167	change laboratory, 66–76
Tampere, 157	collective concept formation with name in
city-level homelessness change laboratory (2019), 166–167	lead, 149–152, 153
	germ cell concept of knotworking, 76
Tampere Action Program for Halving Homelessness (2020–2022), 166–167	movement towards knotworking concept, 152 researchers versus academic librarians
Tampere University, xiii	
i	(emerging gap), 144–145
tangible solutions, 146–149 generated by expansive learning, 147	Vänninen, I., xiii, 60
target, 88 , 111, 137	Vasilyuk, F., 112
tensions, 12, 13, 17, 69	Vergne, J. P., 43
and conflicts (centrality), 11	Vidal-Gomel, C., 33
	videotape, 7, 86, 110, 115
testing, 80, 131, 139, 167 theoretical concepts, 30, 32	virtuous representational activity (Cussins), 9, 10
dialectical movement from abstract to	volitional actions, 16, 17, 111, 114, 116, 125,
concrete, 80	127, 128, 130, 132, 136, 137
initial production, 79	"core of transformative agency," 112
theoretical concepts (Davydov), 2	double stimulation (Vygotsky) "foundational
theoretical thought: origins (Davydov), 23	mechanism," 109
theorizing concept formation in wild (first	pave way for conceptualization efforts, 114
lessons), 6, 8–14	relationship with artifact use, 119
Cussins and cognitive trails, 8–10	vulnerable and fragile nature, 122
Hutchins and material anchors, 11–12	Vygotsky, 112
	10

volitional change actions: emergence, 109
Vulnerability Index, 160
Vygotsky, L. S., 30, 112, 128
activity theory (first generation), 18
culturally-mediated action "prime unit of
analysis," 18
distinction between scientific and everyday
concepts, 15, 22–24
double stimulation, 15–17, 109
experiment of meaningless situation, 17
mediating artifacts (dynamic sense), 113
Thinking and Speech (1987[1934]), 15
volitional action concept, 112
waiting experiment, 17

waiting list, 47
Wartofsky, M. W.
activity theory (third generation), 18–19
"secondary artifacts," 18
"tertiary artifacts," 18
wayfaring (Ingold), 105

Weick, K. E., 42
whitefly (T. vaporariorum), 60–66
systemic model, 65
Wiesel, I., 51
Wittgenstein, L., 38
words: as material anchors, 16
work activities, 3, 22, 109, 112, 133, 135, 136, 137, 139
work: concept formation, 3
working hypothesis, 85, 142, 143, 149, 177
working together, 174
workplaces, xiii, 24, 25, 31
World Economic Forum, 156

Y-Foundation, 167, See also Finnish Housing First Y-Foundation: Housing First Development Network, 168

Zinchenko, V. P., 18 Zott, C., 35