Metadata of the chapter that will be visualized in SpringerLink

Book Title	Psychology as the Science of Human Being		
Series Title			
Chapter Title	Studying Higher Mental Functions: The Example of Imagination		
Copyright Year	2016		
Copyright HolderName	Springer International Publishing Switzerland		
Corresponding Author	Family Name	**Zittoun**	
	Particle		
	Given Name	**Tania**	
	Prefix		
	Suffix		
	Division		
	Organization	University of Neuchâtel	
	Address	Neuchâtel, Switzerland	
	Email	tania.zittoun@unine.ch	

| Abstract | Among the many objects of interest of cultural psychology is imagination. Imagination is a higher function of the mind—that is, it requires the mediation of internalized cultural means. As such, it is both deeply cultural in nature, as well as unique in the way it is experienced by a given person, in a specific time and place. Altogether, it plays a major role in individual and collective change. However, like many other higher functions, it cannot be studied directly: One cannot observe what or how someone is imagining. This is where psychologists have either the choice to give up, or to devise alternative ways to access to imagination. The first part of this chapter defines imagination as sociocultural process. In the second part, it examines the methods that have been used, or could be used, to study imagination, especially the case studies, projective tests, laboratory studies, introspection, autoanalysis, autoethnography, observation, and everyday life enquiry. In the third part, this chapter proposes a synthetic analysis of these techniques, highlighting the specific perspectives they allow for studying imagination. Finally, the chapter suggests that such exploration might offer new keys for the study of higher psychological function, that is, for culture in mind and mind in culture. |

| Keywords (separated by '-') | Imagination - Methodology - Higher psychological function - Culture - History - Cultural psychology |

Chapter 8
Studying Higher Mental Functions: The Example of Imagination

Tania Zittoun

Among the many objects of interest of cultural psychology is imagination. Imagination is a higher function of the mind, it is deeply cultural in nature, unique in the way it is experienced by a given person in a given time and place, and it plays a major role in individual and collective change. However, like many others higher functions, it cannot be studied directly: One cannot observe what or how someone is imagining. This is where psychologists have either the choice to give up, or to devise alternative ways to access to imagination. In this chapter, I have first quickly defined the imagination as sociocultural process. On this basis, I then reviewed some studies allowing studying the phenomenon of imagination. Doing so, I hope to highlight, third, some of the methodological perspectives by which we can document imagination as complex psychological phenomena, and thus enrich theories of human experience.

Imagination as Sociocultural Phenomena

Imagination is the process by which our stream of thought disengages from the here and now of our immediate, or "proximal" experience, in the shared, or "paramount reality" (Zittoun and Gillespie 2015a). Imagination can be triggered by boredom, such as one is daydreaming in the classroom, when facing a rupture in everyday life which calls for new solutions, such as the perspective of a geographical relocation, or by various cultural means, such as watching a move. Imagination can be described as a "loop" of consciousness that allows exploring distal experiences in which the rules of physical time and of causality do not apply—imagining being on a sunny beach when we are in snowy town, imagining how daily life would be on an island or on Mars, or enjoying traveling back in time to undo past events. Hence, using resources from present and past experiences, such as one's actual trips, symbolic resources such as magazine and films, as well as diverse cultural and

T. Zittoun (✉)
University of Neuchâtel, Neuchâtel, Switzerland
e-mail: tania.zittoun@unine.ch

30 social representations, now recombined in new fashions, imagination allows us to
31 explore the past, the future, or alternative realities.

32   Thus defined as a loop, imagination groups diverse phenomena often treated
33 distinctly, such as dreaming, daydreaming or mind-wandering, fantasizing,
34 engaging in an aesthetic experience, anticipating, regretting, planning, playing, or
35 experiencing culture (Singer and Singer 2005; Singer 2000, 2014). These phe-
36 nomena can be described as variations of the loop of imagination, which can be
37 depicted in a three-dimensional space. The first dimension represents the time
38 orientation of the imagining (whether it is about personal or collective past, in the
39 present, or about the future—often moving through these); the second dimension
40 designates the generality of the ideas involved (is it about fixing a chair, or about
41 how to make the world a better place); and the third dimension designates the
42 plausibility or implausibility of the imagination, in relation to the social and
43 material rules of the paramount reality (Zittoun and Gillespie 2015a). Of course,
44 imagination can be more or less active, deliberate, or conscious on any of the
45 aspects just described.

46   Finally, the loop of imagination ends when the focus of consciousness is
47 reengaged in the proximal experience. There, imagination has various outcomes,
48 from the simple pleasure of having been disengaged from a given situation
49 (Oppenheim 2012), to the complex emotional experiences that it may provoke; it
50 produces new or alternative representations, which then might pave the way to
51 concrete actions, to personal choices, or to personal or collective creations, from a
52 new dish to a new political regime (Vygotsky 1994). In that sense, because it is a
53 semiotic process, allowed by our experienced of the world, culturally guided and
54 constrained, and for its consequences in ontogenesis, microgenesis, and socio-
55 genesis, imagination is sociocultural in nature (Vygotsky 1994, 1997; Zittoun and
56 Gillespie 2015a). Imagination is indeed a core feed-forward process in human life,
57 in interactions and in the social world (Valsiner 2014a).

Studying Imagination: Observation, Introspection, and AutoEthnography

60 Although many social groups have, over the ages, systematically cultivated the
61 power of mind and imagination, our Occidental history is one of trying to restrain,
62 or at least, concentrate imagination in some domains of social and private life only.
63 Social scientists have, often for good reasons, great mistrust for imagination, which,
64 with passion and fears, can lead to the most dramatic collective movements (Le Bon
65 2013; Moscovici 1976). For the rest, imagination has generally been tolerated in
66 children and artists or in art-related activities, and otherwise, considered as confined
67 to the madman and the deviant. In adult life, it is mainly creativity that has socially
68 acknowledged outcomes, which is the object of attention (Glăveanu et al. 2015).
69 Interestingly, in the past 150 years in psychology, it is often scientists with an

interest for the arts—whether painting or literature—who also tried to give a more central place to imagination, from Hermann Rorschach to Sigmund Freud and Lev Vygotsky.

Beyond the scarcity of empirical work, the redefinition of imagination proposed above allows to turn to various lines of studies that have examined one or the other of its occurrences: fantasy, daydream, memory, and experiencing or creating arts. In what follows, I identify some of the main methodological strategies that have been chosen to document these phenomena: case studies, the standardized approaches of projective tests and laboratory procedures, introspection in autoanalysis and auto-ethnography, and observation, before turning to more open approaches.

Case Studies

A first range of studies that have documented inner lives and imagination are case studies of people considered as mad or deviant. Pierre Janet's substantial study of a woman suffering from delirium is a paradigmatic case of idiographic science, by which the French psychologist could develop many aspects of his theory of the automatism of mind (Janet 2003, 2005; Zittoun 2008). Freud's case studies of men and women haunted by non-real experiences became classic in the clinical literature and have been widely discussed (Freud 2001c). In such case studies, adults mainly talk in the therapeutic setting or are observed as they act in surprising ways. Similarly, case studies of children have been undertaken; here the emphasis is on talking and the observation of play, seen as a royal road to the unconscious since Melanie Klein and Anna Freud. Inviting children to play, it is they unfolding of imagination that is observed, and acted upon, by therapists. In these lines of studies, Winnicott's transcripts of psychotherapeutic treatment with adults and children (Winnicott 1994, 1996), or Diatkine and Simon's description of the evolution of the cure of a little girl (Diatkine and Simon 2005), give full access to the richness and complication of a person's fantasmatic life, through their plays, fears, anxieties, dreams, daydreams, reveries, transference relations, memories, and hopes. In other words, such case studies reveal the many facets of the work of imagination, and "pathological cases" illuminate more common experiences. Hence, Jerome Singer, a specialist of daydreaming and imagination, similarly based his first studies on psychotherapeutic sessions (Singer 2005, 1976/2014). Here, language and obser- **AQ2** vation are seen as access to the imagination, with arrangements of the setting to facilitate such externalization. In any case, such studies allow both for developing hypothesis one the experiential material used in imagining—memories of emo-tionally loaded event, important relationships, social norms, and discourses—and for developing hypothesis about the processes involved in their development, unfolding, and outcomes.

Projective Tests

Against idiographic science, imagination has also been studied through more systematic, differential, or nomothetic approaches—studies attempting to systematize the collection of data about something per definition highly variable. On the one hand, an often forgotten route to imagination has been open by projective tests. In a surprising 1898 paper, American psychologist George Dearborn wonders how to capture in a systematic way the sorts of imagining in which people engage when they see shapes in the clouds. He thus devises a series of inkblots and invites people to tell what they see. The great diversity of replies is a first disconcerting:

> Why one subject should see in a blot a "cabbage head" and the next an "animal with his mouth open," or why a professor should be reminded by a blot of "half a sweet pea blossom" and his wife of a "snake coiled round a stick," of course no one can at present pretend to explain. There is a temptation in such cases of association as these to call the results the choice of chance, but this means too little-or too much (Dearborn 1898, p. 190).

Interestingly, Dearborn continues:

> it is clear that, as a general principle, the experience, and especially the early experience, of the subject has important influence. For example, study of the records shows that subject H., a purely domestic woman, is reminded most often of domestic objects; while subject 0., who is an artist and student of mythology, sees in the blots many picturesque and fanciful things. The difference between the imaginations of the country and city bred is clear (Dearborn 1898, p. 190).

This beginning of this analysis of people's cultural resources for imagining however is not pursued much. The study of imagination has then followed different routes, whether authors were searching for general principles underlying psychological processes, or individual specificities (Sharp 1899).

On the one hand, projective techniques were further explored toward a differential approach. In France, after a first series of interviews with artists (Passy and Binet 1894), Alfred Binet with Victor Henri proposed a series of completion and projective tests to have access to people's involuntary and voluntary imagination—people had to continue the beginning of a melody line or a sentence, or to comment on a ink shape—with the goal of developing a differential psychology (Binet and Henri 1895, pp. 443–445). Swiss psychologist Alfred Rorschach developed the inkblot technique further and more systematically, as a technique to evaluate people's personality (Chabert and Anzieu 2005, p. 15). However, as Rorschach notes, most people who have to comment of the ink shape think that the task is about imagination (Rorschach 1987, p. 3). As a result, authors discussed on whether creative or surprising answers should be read as indications of creativity and vivid imagination, or, departing from the average, as pathology (Rorschach 1987; Schachtel 2013, p. 65). Note that this line of uses of projective test has been pursued in clinical practice, where projective tests are still often as offering an access to children and adults inner lives (Chabert and Anzieu 2005).

On the other hand, in England, Frederic Bartlett, knowing the work reported above, developed an inkblot test where people were asked to describe what they

were seeing when shown as series of abstract figures. As Dearborn, Bartlett finds the diversity of answers striking:

> What to one was a 'camel' (blot 2) to another was a 'tortoise'; to another a 'dog worrying a table-cloth'; to another 'two dead ducks and an ostrich'; to another an 'octopus'; to another 'a baby in a cot with a doll falling out'; to another a 'picture of Sohrab and Rustum in a book of Arnold's poems.' The uninitiated would hardly suspect that the following are all attempts to describe the same object… (Bartlett 1916, p. 254)

In his commentary, Bartlett refers to studies proposing typologies of people according to their answers; yet, as he elegantly formulates, "separation into types, though it is of considerable practical value, solves no theoretical problem" (Bartlett 1916, p. 255), What he rather suggests is to engage in a developmental understanding of how people, through their trajectories of what we could call socialization—experience and learning—come to develop certain experiences and memories which they then use when imagining. This interesting genetic route has to my knowledge not been pursued with such techniques. However, it is true that accessing to imagination through projective test only gives access to the part triggered by the material—whether it is to engage into interpersonal comparison or an understanding of underlying processes.

Dream Laboratory Studies

Also attempting to develop systematic approaches, further from the psychoanalytic tradition and more inspired by the natural sciences, experimental and cognitive psychologists have also been interested in variations of imagination. Research on dreams has defined a methodological paradigm, consisting in having participants sleeping in a laboratory, and being awaken on specific phases of their sleep, a few times a night; they are then interviewed about their dreams following a standard procedure—similar techniques have been defined for adults as well as for children (Foulkes 1999; Hobson 2002; Hobson et al. 2000). Such studies have led to strong opposition on the nature of the material used in dreaming—mundane traces of the previous-day experiences (Hobson 2002), or older memoires and experiences, internalized social and cultural norms and discourses (Freud 2001a; Nathan 2011)? Also, they have allowed to make hypothesis on the underlying processes, and their development (Foulkes 1999). Whether these narrated dreams can be considered as the dream itself or, precisely, as narration which transforms the dream experience into a text, is a matter of discussion since Freud (1999).

AQ3

Avoiding this problem, some recent studies directly enquire neurological activation; hence, studies suggest that the patterns of neurological work are very similar in dreaming and in mind-wandering (the label used for designating daydreaming in the current neuroscientific literature) (Fox et al. 2013). Avoiding the risk of naturalization of a psychological process, Paul Harris has on the other side worked experimentally to explore some of the properties of imagination in children as they

191 engaged in systematic tasks—yet emphasizing what participates to logical rea-
192 soning, rather than the uniqueness of disengaging from reality (Harris 2000). Here,
193 of course, the material for imaging is of little relevance.

Introspection

195 On a different, yet complementary route, most researchers have realized, at some
196 point, that self-knowledge might be a key process in understanding other minds. It
197 has led to the whole tradition of introspection, which can be more or less
198 self-directed, or addressed to, or guided by someone else, with all its variations and
199 the debates it raises (Clegg 2013). Introspection is the process by which one
200 examines his or her own thoughts. The history of self-observation methods has been
201 done elsewhere, and here, I have focused on some aspects which are of relevance
202 for imagination in psychology. To be short, Wundt is often considered as one of the
203 authors that has asked his participants to use introspection to respond to his tasks;
204 however, recent historiography shows that he actually trained people to translate
205 simple perceptions (inner-perception) (Brock 2013; Danziger 2001). Introspection
206 was nevertheless also used to give access to more complex states of mind states of
207 mind, for instance in the USA, where William James was calling upon his own
208 experience. If it is true that introspection was put in crises by the criticisms issued
209 from behaviorism, which pursued however different goals (Danziger 1980, p. 255),
210 it remained quite present in France. There, in effect, introspection was supported in
211 psychology through philosophy, as the influence of the phenomenology of Husserl
212 remained very strong (for an overview see Brinkmann 2013). It became notably a
213 source of inspiration to Jean-Paul Sartre's enquiry, including his work on imagi-
214 nation (Sartre 1940, 1989). In more modern versions, phenomenology inspired the
215 development of technique for eliciting the other's introspection, used mainly in the
216 analysis of activity at work ("explicitation" in French) (Vermersch 2009).

Autoanalysis

218 Beyond classic introspection, two variations are worth mentioning here. First,
219 autoanalysis is one of the specific techniques of access to imagination. The notion
220 of "autoanalysis" stems from psychoanalysis; it designates a modality of observa-
221 tion of one's own psychic life, while admitting its unconscious underpinnings. For
222 that discipline, Freud's autoanalysis at the end of the nineteenth century is con-
223 sidered as foundational. It is through his introspective work, a year-long systematic
224 observation and analysis of his inner life—reactions to others, lapsus, emotional
225 states, and more importantly, dreams—together with his theoretical work and data
226 coming from his patient that Freud elaborated the *Interpretation of dreams* (Freud
227 2001b) and all his theoretical work to come. Some commentators have noted that

228 this autoanalysis was not the product of a lonely, magically inspired mind; rather, it
229 was also addressed to a friend, through a long correspondence with Wilhelm Fliess
230 (Bonnet 2010; Roudinesco and Plon 2011, pp. 117–121). According to Bonnet, **AQ4**
231 autoanalysis, which demands an attention to one's inner life, fantasies, daydreams,
232 emotional reactions to people and situations, and dreams, can be done alone. It can
233 be practiced while walking or gardening, even though it is ideally done while
234 writing, and with the distant supervision of someone else (Bonnet 2010). For some
235 other authors, autoanalysis can be properly conducted only when someone had
236 experience of a psychoanalytical treatment beforehand. In any case, its main out-
237 comes are it invites to recognize the plurivocity of the mind, the many contradictory
238 motives which can inhabit a person, and the plurality or lives coexisting in her body
239 and mind. Interestingly, Sartre himself seems to have used the occasion of writing
240 on Freud's autoanalysis to have stimulated his own introspective work, which
241 would, a few later, bring him to his own autobiographical writing (Pontalis 1984).
242 In his own writing, clinical psychologist Jerome Singer reports his introspective
243 analysis—quite close to autoanalysis—to propose developmental hypothesis on
244 imagination (Singer and Singer 1992). The few instances of autoanalytical work
245 hence suggest the importance of such approach for the study of the development,
246 the resources, and the outcomes of imagination.

Autoethnography

248 Second, in social sciences, the notion of "autoethnography" was developed to
249 account for the experience of the researchers in the construction of social facts and
250 observations, a century after Freud, in the 80s of the 20's century. If autoanalysis is **AQ5**
251 based on the hypothesis of a researcher's unconscious or inner life, autoethnog-
252 raphy is based on the fact that the researcher participates to the construction of the
253 social reality in which he or she is engaged, and that this situation also constitutes
254 personal experiences which are worth examining. Ellis thus writes that autoeth-
255 nography combines autobiography and ethnography:

256 When researchers do autoethnography, they retrospectively and selectively write about
257 epiphanies that stem from, or are made possible by, being part of a culture and/or by
258 possessing a particular cultural identity. However, in addition to telling about experiences,
259 autoethnographers often are required by social science publishing conventions to analyze
260 these experiences. (Ellis et al. 2010, paragr. 8).

261 Its aim is, through appropriate and skillful use of the written form, to bring the
262 reader to experience the quality of the situation or event they want to transmit, while
263 also engaging with existing theories and observations in the social sciences, (Ellis
264 et al. 2010; Wall 2006). Because of its openness to diverse aspects of social,
265 cultural, or institutional settings and the researcher's experiences in it, whatever his
266 or her gender, belonging or body-ability, such method can give access to a wide

267 range of experiences. In fact, it seems that autoethnography has mainly examined
268 the researcher's experience in work situation, migration, wars, social injustice,
269 health issues—but not the actual experience of imagining.

Observation

271 A last methodological route is that of observation, which has also long being used
272 to study fantasy and imagination: observation of children's play in therapeutic
273 setting in the laboratory or in daily situation; observation of early interaction in
274 everyday and laboratory situation; observation of people's reactions to images and
275 films, again in different situations (Blumer and Hauser 1933; Hedegaard and Fleer
276 2013; Miller et al. 1993; Nelson 2006; Singer and Singer 1992, 2005; Taylor 1999;
277 Trevarthen 2012a, b). However, because imagination is often considered as
278 something internal in adults, it has less been addressed through such means. Adults
279 are mostly asked to verbalize their experience, in natural or more research situa-
280 tions. Adults have been trained into quasi-experimental tasks in daily life, or to
281 report on their daily experiences about daydreaming (Pereira and Diriwächter
282 2008); authors and artists have been interviewed about their imagination
283 (Oppenheim 2012; Passy and Binet 1894); and adults have been interviewed on the
284 basis of their filmed activity of painting, music playing, or martial art practice (Diep
285 2011; Gfeller 2015), using a technique inspired by "clinic of activity" (Clot and
286 Kostulski 2011). These studies have allowed identifying many variations of
287 imagination in play, imaginary companions, and daydreaming; they allow both not
288 only to identify types and differences (e.g., in ages, gender), but also to give access
289 to processes. The last series of studies mentioned—combining observations and
290 different techniques of guided introspection—gave access to new and overlooked
291 aspects of imagination, such as its embodied nature or its outcomes. We will come
292 back to these approaches combining perspectives below.

Everyday Life Enquiry

294 Data do not need to be always strictly designed or created; often, it can simply be
295 found where it stands. Coming back to more anthropological approaches, or simply,
296 to the fact that the source of our theoretical amazement is in the world that surround
297 us (Brinkmann 2012, 2014a; Cohen and Taylor 1992), imagination can also be
298 studied in everyday life. In effect, our theoretical work has allowed us to redefine
299 imagination as the process of uncoupling from the here and now experience, to
300 engage in a distal sphere of experience, with the use of diverse resources; as looping
301 away, imagination always comes back to the ongoing situation, the imagining
302 person's experience having temporarily been enriched. On this basis, instances of
303 imagination become visible in many daily situations. We thus have documented

people making decisions in their daily lives, children playing, or solving tasks at school, adults in prison, adultery couples; as data, we have used documentary film, self-writings (diaries, letters); instances documented through clinic of activity as well as diverse research interviews; and secondary analysis (Gillespie 2010; Gillespie et al. 2008; Gillespie and Zittoun 2010a; Zittoun et al. 2012; Zittoun and de Saint-Laurent 2015; Zittoun and Gillespie 2012, 2015a). We have also considered drawings, paintings, musical pieces, poems, sculpture and films, media documents, both as triggers of imagination or as outcomes of other people's imagining (Gillespie and Zittoun, in press; Zittoun and Gillespie 2014, 2015a). Finally, we relied on our own experience, as former children, adults, parents, researchers, art spectators, and so on, which we analyzed reflectively, in an approach inspired by the two traditions of introspection described above.

Doing so, we did more than simply pile up evidence; our methodological ecumenism has an epistemological grounding. We follow thus as a pragmatist tradition initiated in early psychology and sociology (Freud 1963, 2001b, 2004; James 1890; Schuetz 1944, 1945), interestingly pursued by other researchers interested in our capacity to "escape" from the present (Cohen and Taylor 1976/1992), and recently re-theorized (Brinkmann 2012, 2014a, b; Brinkmann and Tanggaard 2010; Jacobsen et al. 2014; Zittoun et al. 2013, Chap. 12).

What Now?

These main methodological routes are not the only ones that can be devised for the study of imagination. They reflect theories or implicit assumptions about the nature of the phenomena pertaining to imagination—whether it is an expression of an internal disposition, caused by various factors, or whether it is a social and cultural phenomenon; whether it is a rough, primitive, and anecdotic process meant to lead to rationality, or whether it has a value on its own; and whether it is the expressions of predefined given, or whether it is a dynamic developing through the life course, with the rest of the psychological life. They have contributed to the understanding of imagination, at times keeping close to the researcher's ideas, sometimes open to the surprise of other people's experience. But how can we move through this diversity and reflect on methods beyond the case of imagination?

Perspectives in Methodology

Studies in imagination are grounded in different theoretical and epistemological traditions. This, as a consequence, brings them to privilege often one perspective only on the phenomenon at hand. Adopting a more analytical stance will allow for a more complex view of imagination through the combination of various perspectives (Flick 1992; Gillespie and Cornish 2014; Zittoun and Gillespie 2015b). If

341 imagination is always a very personal and a private phenomenon, it can be docu-
342 mented from different perspectives. Classically, it can be documented from the
343 person's perspective, or from the observer's perspective; yet each of these per-
344 spectives can be more or less reflexive (Brinkmann 2013; Gillespie and Zittoun
345 2010b). In addition, the clinical tradition has taught us that the observer is mostly
346 affected by the participant's experience and invites us to consider such intersub-
347 jective experiences (Abbey and Zittoun 2010). Finally, theoretical elaboration
348 demands the examination of these different levels of experiences in light of con-
349 ceptual work (Valsiner 2014b, c; Valsiner et al. 2009). It is these different per-
350 spectives that I will now examine in turn, trying to highlight how these contribute to
351 the understanding of imagination as a higher psychological function. These dif-
352 ferent perspectives and their relation are summarized in Table 8.1.
353   The first line focuses on the *first person perspective*, which is that of the
354 researcher, or in some cases, that of a person, engaged in her experience as it goes.

Table 8.1 Perspectives in the study of imagination

Perspective Reflexivity	Direct	Reflexive	Deliberate
First person	I am engrossed in an imaginary experience (possibly externalizing) *Daydreaming, imagining, doing arts,* etc.	I reflect on my experience and on how it affects or affected me. *Autoanalysis, introspection, autoethnography, diary writing,* etc.	I look for triggers or resources that can create such imaginary experiences *Using resources*
Third person	I observe S having an imaginary experience *Observation, interviews*	I observe S reflecting about his/her experience and how he/she was affected by it *Diary analysis, interviews, experimentation*	I invite S to reflect about his/her experiences *Techniques of elicitation, work clinic, forms of guided introspection, didactic situations*
Intersubjective	I interact with S *Interaction, collaboration, observation, interviews*	I reflect on how interacting with S affects S (transfer) I reflect on how interacting with S affects me (countertransfer) *Autoanalysis, introspection, autoethnography,* etc.	I reflect on how these mutual interactions construct the interaction (Abbey and Zittoun 2010) *Specific attention to the relational modality*
Analytical: abduction			I look for what is common in these various experiences, and how this corresponds or not to theoretical constructs

355 Explicitly or not, experience is an important starting point in psychological and
356 social science: it is from our experience of everyday life that we have intuitions,
357 questions, and gaps that we wish to pursue as researchers. Hence, imagination is
358 present in experiences of dreaming, decision making, regretting, or daydreaming.
359 Moving from experiencing imagination to a more reflexive stance demands a
360 phenomenological movement (Brinkmann 2013), which can be done with the use
361 more or less theoretical tools. This understanding of imagination can bring the
362 person/researcher to deliberately provoke further experiences of imagination. In that
363 sense, the first line of the table can be seen as potentially cyclical, where more
364 reflexivity brings to more deliberate and conscious occurrences of imagining.
365 Hence, the person can deliberately manipulate triggers for imagination, use
366 resources, and orient the directions it takes, its outcomes, and their realization.
367 Authors such as Freud (who experienced dreaming, cocaine and hypnosis), Sartre,
368 Singer, and certain ethnographers and sociologists importantly relied on this type of
369 experiences to develop their understanding of imagination.

370 Research starting with an attempt by the researcher to directly access to a *third*
371 *person's perspective*, as in the second line, is the most common in psychology
372 research. Observing people interacting in laboratory situations or in daily life,
373 observing responses in a PET scan, seeing how people react to various stimuli (to
374 words, cards, etc. as in cases of projective test), examining how people are
375 engrossed in TV watching, painting, music playing or as they watch an art piece are
376 such approaches. One can question where lies imagination, and on which basis it is
377 inferred. Here, authors mostly rely on language—observing people talk is often
378 seen as good-enough access to their imagination. But if we admit that imagination
379 is, as any psychological experience, based on the internalization and new synthesis
380 made out of internalized material; that it is affected by the conditions in which it
381 occurs, where for instance an ongoing activity feeds-back in imagination (as in
382 diary writing, or dancing), then we also have to acknowledge that imagination is
383 displayed, or given off, by diverse forms of externalization. The TV viewer
384 engrossed in a film or hiding his head in a pillow (Lembo 2000), the painter moving
385 back a few steps (Glăveanu 2011), the aïkidoka slowing down his or practice
386 (Gfeller 2015), physically externalize some aspects of their process of imagining.
387 Such variations have been widely described and analyzed in early infant and triadic
388 interactions (Stern 1998; Trevarthen 2012c); however, we have much less a
389 vocabulary for describing gestures, body postures, and nonverbal forms of exter-
390 nalization in adults. Multimodal studies have engaged in the description of these
391 semiotic forms, but often without questioning the intention to communicate lying in
392 there (Jewitt 2014; Kress 2009). Methodologically, much has to be developed on
393 that line, also, experience shows that it would to gain to be combined with other
394 perspectives.

395 A second common variation of that perspective is these in which the research
396 more actively solicits the work of imagination of the participant. Asking people to
397 realize a boring task and tell what comes to mind, or to report about episodes of
398 mind-wandering (Pereira and Diriwächter 2008), waking up people and ask them to
399 report on dreams (Foulkes 1999; Hobson 2002) are such examples. Here, the data

are generally the discourse of the person who is self-writing or thinking aloud. Here, it might be important to differentiate between the sincerity of an expression and the analytical accuracy of an interpretation (Brinkmann 2013). Imagination is an embodied, multimodal, often inconsistent experience; the very act of turning it into a narrative forms flattens it out and submits it to the temporal and logical demands of communicable language. Too often, the researchers consider these reports as good-enough versions of the process of imagination itself, not questioning these process of transformation. Although some verbal expressions are sincere, they are not strictly reflecting—or not transparently translating—psychological process, many of which are not verbal and not fully conscious.

One possible way to overcome this difficulty is combining perspectives. In effect, admitting that imagination is often not conscious or deliberate for a person, yet that it can be visible to a theoretically informed observer that a person is imagining, the combination of inner and outer perspectives may allow to construct or to identify the process of imagination that does, or that did take place. The techniques using commented filmed activities, as in the "work clinic", or techniques of elicitation, are techniques by which the researcher guides the introspection of the research participant. In terms of data, it allows the research to combine his or her observation—for instance, or a moment of hesitation in painting when the artists seem to explore possible ways to continue (Bertinotti 2014)—with what the person actually can verbalize. The observations themselves can become secondary stimulus to trigger the reflexion of the participant (Clot and Kostulski 2011). Altogether, the process searched can be constructed by triangulation of these diverse perspectives and semiotic modalities (Flick 1992).

The third line in the table designates a phenomena often overlooked in research, *intersubjectivity*, as imagination is often considered as private. However, interacting with others is one of the elements both triggering and feeding in imagination. When we interact with others, we of course intentionally verify that they understand us and we try to understand them; but also, we nourish questions about who they are, we think about who they remind us of, we feel toward them, and we read into their nonverbal language (body posture, silences, eye gaze, smell, etc.). This has been addressed differently in various domains in psychology (Grossen 2010; Rommetveit 1985) and has been very called countertransference by the psychoanalytical tradition. Transference is the process by which a patient reactivates memories of parents, friends, real and imaged figures, and projects them on the psychoanalyst. Countertransference is the emotional reactions the analyst has to the patient, what he or she does represents to him or her, how this patient reactivates in him emotional reactions, how she reacts to the projections put unto him or her. Transference and countertransference can thus be seen as the loops of imagination triggered by the relation itself; it is about the dialogicality activated by the intersubjective situation (Grossen 2010; Grossen et al. 2014). As a consequence, researchers who would observe their own imagination activated by interactions could usefully complement studies in which they ask someone else to recall instances of imagining. A closer analysis of how such inner gaze can be combined with the unfolding interactions demands a more microgenetic analysis (Abbey and

Zittoun 2010). Hence, Emily Abbey and I proposed to identify three semiotic streams within interactions: first, the "meaning stream," where each participant tries to understand what the other is talking about, respond, etc.; second, the "sense-feeling stream" where "each person is engaged in sense making, which is directly following the participants' changing emotional experiences, constantly triggered by the presence and the discourse of the other, or any atmospheric reason" (Abbey and Zittoun 2010, p. 7); and third, the "reflexive stream," where "each participant can also draw on various other signs to synchronically reflect on the ongoing evolving situation" (Abbey and Zittoun 2010, p. 7). On this basis, the proposition is to focus on moments of breach or rupture, when the reflexive streams identify that these "sense-feeling" does not correspond to what is meant, or that the meaning is unclear, or that there is any other change in the intersubjective dynamic. The methodological proposition was then, rather to "let go," to precisely focus on such ruptures; for it is in moment of breach of meaning that imagination may unfold (Zittoun and Gillespie 2015a).

Finally, the fourth and last line of the table designates the effort of putting any empirical evidence of the kinds seen so far, and others, in dialog with theorization —that is, abduction. To understand imagination, theoretical imagination is required, as it is about some phenomena which cannot be seen; and in such darkness, our only light are theoretical tools; yet whatever they illuminate, can transform them in turn (Peirce 1878; Valsiner 2014b, c; Valsiner et al. 2009).

From Imagination to Higher Psychological Functions

This chapter explored some ways through which imagination has been and can be studied. These ways are diverse and reflect many epistemological and methodological traditions within psychology. This exploration showed some ways through which we can further the study of imagination, but mainly, it is an occasion to reflect on the study of higher mental functions.

Studying Imagination

This rapid overview allows underlining two main aspects for progressing in the study of imagination. Both are based on a theoretical reasoning: on the one hand, imagination is a process, which is nourished by semiotic resources and leads to certain outcomes; and on the other hand, it is multimodal. Imagination can only be inferred on the basis of traces of externalization, and these are multimodal as well. As consequence, imagination can be experienced by a researcher, or observed in others, or as self and other interact. Imagination is best observed when different perspectives are brought together—self and other, inner and outer, first and third, or different semiotic modalities (gesture and language, for instance). More specifically,

⁴⁸² our small enquiry invites, first, not to limit any enquire to verbal language; second,
⁴⁸³ it privileges a theoretically justified methodological ecumenism; third, it suggests to
⁴⁸⁴ counterbalance the simplicity of observation or discourse analysis with reflexivity,
⁴⁸⁵ and more generally, with triangulation of perspectives. But why is that? This is
⁴⁸⁶ where we have to come back to the more general question of studying higher
⁴⁸⁷ psychological functions.

Studying Higher Mental Functions

⁴⁸⁹ Imagination is here just one case of a complex phenomenon to be studied by
⁴⁹⁰ cultural psychology seen as general psychology (Valsiner 2014a). Psychology can
⁴⁹¹ in effect choose to focus on very specific and local thinking processes, reactions,
⁴⁹² physiological processes related to human activity; or it can more ambitiously aim at
⁴⁹³ understanding the more complex conduct in which people engage, as they are
⁴⁹⁴ located in a complex world of culture, in which they find a unique expression—
⁴⁹⁵ which is the goal of cultural psychology on the twenty-first century.

⁴⁹⁶ Higher psychological functions designate these human conducts which are only
⁴⁹⁷ possible as people have internalized the complex semiotic organization of the social
⁴⁹⁸ and cultural environment and are thus socially situated and culturally mediated.
⁴⁹⁹ They demand the mastery of a semiotic system to be able to act in, and upon the
⁵⁰⁰ world, often, through further cultural mediation (e.g., Vygotsky 1994, 2004; THIS
⁵⁰¹ VOLUME). Reflex, direct apperception, after-colors effect, rote remembering are
⁵⁰² not higher functions. Daydreaming about a better life, reading a novel, solving a
⁵⁰³ mathematical operation, remembering a movie, acting in the name of a deity all
⁵⁰⁴ depend on such higher psychological functions. Although the term has a normative
⁵⁰⁵ connotation—something is higher than something else—here I use it with care,
⁵⁰⁶ simply to designate the mediated, distanced nature of the processes involved.

⁵⁰⁷ Historically, since the origins of psychology as a science, there has been a divide
⁵⁰⁸ between approaches considering, on the one side, that it is wiser to start to study
⁵⁰⁹ simple operations and activities in human, and that complex conduct could then be
⁵¹⁰ understood through the sum or the recombination of its parts, and approach which,
⁵¹¹ on the other side, considered that it was certainly more accurate to start addressing
⁵¹² complex phenomena for their own sake, as these were probably more as the sum of
⁵¹³ their parts. This divide is also deeply connected with the question, clearly appearing
⁵¹⁴ in this chapter, of whether one should first identify phenomena that allow inter-
⁵¹⁵ personal comparison, or the understanding of the complex conduct of a single
⁵¹⁶ person, as an access to more complex laws (e.g., Sharp 1899). These questions are
⁵¹⁷ well-known, but how deeply they have constructed methodologies and hold epis-
⁵¹⁸ temologies captive is sometimes forgotten.

⁵¹⁹ In this chapter, I have recalled that the same question addressed through different
⁵²⁰ techniques brings about different data—which is redundant—and that these tech-
⁵²¹ niques reflect assumptions about the nature of the phenomena at hand. Typically, a
⁵²² method that respects the temporality of a phenomenon reflects assumptions on their

523 developmental nature (Gillespie and Zittoun 2010a). In addition, I wish to underlie
524 the deeper underling epistemological positioning of research implied in different
525 methodologies. Higher psychological phenomena are actually theoretical con-
526 structs; people do things, remember, laugh, buy milk or imagine their holidays;
527 psychologists make hypothesis about cultural guidance, structures of recognition, or
528 uses of resources. This is why, epistemologically, the question of how to capture
529 higher psychological phenomena necessarily demands the careful combination of
530 perspectives. Elsewhere, we have shown that understanding how someone expe-
531 riences the war demands also a careful documentation of how the war occurred
532 around the person even if she could not see it—only elements connected to the
533 paramount reality and its sociogenesis give shape to the ontogenetic conduct
534 (Gillespie and Zittoun 2015a, b). Here, I have suggested that understanding of
535 imagination, as sociocultural process, might require combining four perspectives:
536 that of the one who experiences, that of the one who observes, that of the one who
537 experiences the observation, and that of theories which only gives us the necessary
538 support to hold these together, beyond the obvious.

References

540 Abbey, E., & Zittoun, T. (2010). The social dynamics of social science research: Between poetry
541   and the conveyer belt. *Qualitative Studies, 1*(1), 2.
542 Bartlett, F. C. (1916). An experimental study of some problems of perceiving and imagining.
543   *British Journal of Psychology, 8*, 222–266.
544 Bertinotti, D. (2014). "*Ce que l'art ne dit pas…*". *Une étude socioculturelle de la dimension
545   psychologique caractérisant l'activité artistico-visuelle chez l'adulte* (MA thesis). University
546   of Neuchâtel, Neuchâtel.
547 Binet, A., & Henri, V. (1895). La psychologie individuelle. *L'année psychologique, 2*(1), 411–
548   465. doi:10.3406/psy.1895.1541.
549 Blumer, H., & Hauser, P. M. (1933). *Movies, deliquency, and crime*. New York: The Macmillan
550   Company.
551 Bonnet, G. (2010). *L'autoanalyse*. Paris: Presses Universitaires de France.
552 Brinkmann, S. (2012). *Qualitative inquiry in everyday life: Working with everyday life materials*.
553   London: Sage.
554 Brinkmann, S. (2013). Practice of self-observation in the phenomenological traditions.
555   In J. W. Clegg (Ed.), *Self-observation in the social sciences* (pp. 195–222). New
556   Brunswick/London: Transaction Publishers.
557 Brinkmann, S. (2014a). Doing without data. *Qualitative Inquiry, 20*(6), 720–725.
558 Brinkmann, S. (2014b). Doing without data. *Qualitative Inquiry, 20*(6), 720–725. doi:10.1177/
559   1077800414530254.
560 Brinkmann, S., & Tanggaard, L. (2010). Toward an epistemology of the hand. *Studies in
561   Philosophy and Education, 29*(3), 243–257.
562 Brock, A. C. (2013). The history of introspection revisited. In J. W. Clegg (Ed.), *Self-observation
563   in the social sciences* (pp. 25–44). New Brunswick/London: Transaction Publishers.
564 Chabert, C., & Anzieu, D. (2005). *Les méthodes projectives* (Original 1961.). Paris: Presses
565   Universitaires de France.
566 Clegg, J. W. (Ed.). (2013). *Self-observation in the social sciences*. New Brunswick/London:
567   Transaction Publishers.

568   Clot, Y., & Kostulski, K. (2011). Intervening for transforming: The horizon of action in the clinic
569   of activity. *Theory and Psychology, 21*(5), 681–696. doi:10.1177/0959354311419253.

570   Cohen, S., & Taylor, L. (1992). *Escape attempts: The theory and practice of resistance to*
571   *everyday life* (Original 1976.). London: Routledge.

572   Danziger, K. (1980). The history of introspection reconsidered. *Journal of the History of the*
573   *Behavioral Sciences, 16*(3), 241–262. doi:10.1002/1520-6696(198007)16:3<241:AID-
574   JHBS2300160306>3.0.CO;2-O.

575   Danziger, K. (2001). Introspection: History of the concept. In P. B. Baltes & N. J. Smelser (Eds.),
576   *International encyclopedia of the social and behavioral sciences* (pp. 7888–7891). Oxford:
577   Pergamon.

578   Dearborn, G. V. (1898). A study of imaginations. *The American Journal of Psychology, 9*(2), 183–
579   190. doi:10.2307/1411757.

580   Diatkine, R., & Simon, J. (2005). *La psychanalyse précoce: le processus analytique chez l'enfant*.
581   Paris: Presses Universitaires de France.

582   Diep, A. (2011). *"On connaît la musique?" un regard socioculturel sur le travail des musiciens*
583   *(Mémoire de Master)*. Neuchâtel: University of Neuchâtel.

584   Ellis, C., Adams, T. E., & Bochner, A. P. (2010). Autoethnography: An overview. *Forum*
585   *Qualitative Sozialforschung/Forum: Qualitative Social Research, 12*(1).

586   Flick, U. (1992). Triangulation revisited: Strategy of validation or alternative? *Journal for the*
587   *Theory of Social Behaviour, 22*(2), 175–197.

588   Foulkes, D. (1999). *Children's dreaming and the development of consciousness*. Cambridge and
589   London: Harvard University Press.

590   Fox, K. C. R., Nijeboer, S., Solomonova, E., Domhoff, G. W., & Christoff, K. (2013). Dreaming as
591   mind wandering: Evidence from functional neuroimaging and first-person content reports.
592   *Frontiers in Human Neuroscience, 7*, 412. doi:10.3389/fnhum.2013.00412.

593   Freud, S. (1963). *Jokes and their relation to the unconscious*. New York: Norton.

594   Freud, S. (2001a). On dreams (1901). In: *The complete psychological works of sigmund freud*
595   (New edition., Vol. 5, pp. 631–714). London: Vintage Classics.

596   Freud, S. (2001b). *The interpretation of dreams* (New Ed., Vol. 4–5). Vintage.

597   Freud, S. (2001c). *Two Case Histories ('Little Hans' and 'The Rat Man'*. In: Strachey, J. (Ed.),
598   (Original edition 1909., Vol. 10). London: Vintage Classics.

599   Freud, S. (2004). *Psychopathologie de la vie quotidienne*. Paris: Payot.

600   Gfeller, F. (2015). Explorer des réalités et créer des possibles. La pratique de l'aïkido considérée
601   sous l'angle de la psychologie socio-culturelle : créativité, imagination et corps. *Dossiers de*
602   *psychologie et éducation, 72*, 1–107.

603   Gillespie, A. (2010). Autobiography and identity: Malcolm X as author and hero. In R. E. Terrill
604   (Ed.), *The Cambridge companion to Malcolm X* (pp. 26–38). Cambridge: Cambridge
605   University Press.

606   Gillespie, A., & Cornish, F. (2014). Sensitizing questions: A method to facilitate analyzing the
607   meaning of an utterance. *Integrative Psychological and Behavioral Science*, 1–18. doi:10.
608   1007/s12124-014-9265-3.

609   Gillespie, A., Cornish, F., Aveling, E.-L., & Zittoun, T. (2008). Living with war: Community
610   resources, self-dialogues and psychological adaptation to World War II. *Journal of Community*
611   *Psychology, 36*(1), 35–52.

612   Gillespie, A., & Zittoun, T. (2010a). Studying the movement of thought. In A. Toomela &
613   J. Valsiner (Eds.), *Methodological thinking in psychology: 60 years gone astray?* (pp. 69–88).
614   Charlotte: Information Age Publisher.

615   Gillespie, A., & Zittoun, T. (2010b). Using resources: Conceptualizing the mediation and
616   reflective use of tools and signs. *Culture & Psychology, 16*(1), 37–62. doi:10.1177/
617   1354067X09344888.

618   Gillespie, A., & Zittoun, T. (2015a). Something from nothing: A case study in the emergence and
619   dissolution of meaning. In D. Winther-Lindqvist & J. Bang (Eds.), *Nothingness*. New
620   Brunswick: Transaction.

621 Gillespie, A., & Zittoun, T. (2015b). Social and psychological movement: Weaving individual
622   experience into society. In B. Wagoner, N. Chaudhary, & P. Hviid (Eds.), *Integrating*
623   *experiences: Body and mind moving between contexts* (pp. 279–294). Charlotte: Information
624   Age Publishing.
625 Glăveanu, V. P. (2011). Creating creativity: Reflections from fieldwork. [References]. *Integrative*
626   *Psychological & Behavioral Science, 45*(1), 100–115. doi:10.1007/s12124-010-9147-2.
627 Glăveanu, V. P., Gillespie, A., & Valsiner, J. (Eds.). (2015). *Rethinking creativity: Perspectives*
628   *from cultural psychology*. London: Routledge.
629 Grossen, M. (2010). Interaction analysis and psychology: A dialogical Perspective. *Integrative*
630   *Psychological and Behavioral Science, 44*(1), 1–22. doi:10.1007/s12124-009-9108-9.
631 Grossen, M., Florez, D., & Lauvergeon, S. (2014). Dealing with clients' diversity in test situations:
632   Client categorisations in psychologists' accounts of their practices. *International Journal of*
633   *Educational Research, 63*, 15–25. doi:10.1016/j.ijer.2012.09.003.
634 Harris, P. L. (2000). *The work of the imagination*. Oxford/Malden: Wiley-Blackwell.
635 Hedegaard, M., & Fleer, M. (2013). *Play, learning, and children's development: Everyday life in*
636   *families and transition to school*. Cambridge: Cambridge University Press.
637 Hobson, J. A. (2002). *Dreaming: A very short introduction*. New York: Oxford University Press.
638 Hobson, J. A., Pace-Schott, E. F., & Stickgold, R. (2000). Dreaming and the brain: Toward a
639   cognitive neuroscience of conscious states. *Behavioral and Brain Sciences, 23*(06), 793–842.
640   doi:10.1017/S0140525X00003976.
641 Jacobsen, M. H., Drake, M. S., Keohane, K., & Petersen, A. (Eds.). (2014). *Imaginative*
642   *methodologies in the social sciences: creativity, poetics and rhetoric in social research*.
643   Burlington: Ashgate Pub Co. New edition.
644 James, W. (1890). *The principles of psychology* (Vol. II). New York: Dover Publications.
645 Janet, P. (2003). *De l'angoisse à l'extase. Étude sur les croyances et les sentiments* (Original
646   edition 1927., Vol. II). Paris: Librairie Félix Alcan.
647 Janet, P. (2005). *De l'angoisse à l'extase. Étude sur les croyances et les sentiments* (Oroginal
648   publication 1926., Vol. I). Paris: Librairie Félix Alcan.
649 Jewitt, C. (Ed.). (2014). *The Routledge Handbook of Multimodal Analysis* (2e éd.). London:
650   Routledge & Kegan Paul.
651 Kress, G. (2009). *Multimodality: A social semiotic approach to contemporary communication*.
652   London/New York: Routledge.
653 Le Bon, G. (2013). *Psychologie des foules* (Original publication 1895.). Brussels: UltraLetters.
654 Lembo, R. (2000). *Thinking through television*. Cambridge: Cambridge University Press.
655 Miller, P. J., Hoogstra, L., Mintz, J., Fung, H., & Williams, K. (1993). Troubles in the garden and
656   how they get resolved: A young child's transformation of his favorite story. In C. A. Nelson
657   (Ed.), *Memory and affect in development* (Vol. 26, pp. 87–114). Hillsdale: Lawrence Erlbaum.
658 Moscovici, S. (1976). *Social influence and social change*. London: Academic Press.
659 Nathan, T. (2011). *La nouvelle interprétation des rêves*. Paris: Odile Jacob.
660 Nelson, K. (Ed.). (2006). *Narratives from the crib* (2nd, oringal publication 1989). Cambridge,
661   MA: Harvard University Press.
662 Oppenheim, L. (2012). *Imagination from Fantasy to Delusion*. New York: Routledge.
663 Passy, J., & Binet, A. (1894). Notes psychologiques sur les auteurs dramatiques. *L'année*
664   *psychologique, 1*(1), 60–118. doi:10.3406/psy.1894.1046.
665 Peirce, C. S. (1878). How to make our ideas clear. In: *Writings of Charles S. Peirce* (Vol. 3).
666   Bloomington: Indiana University Press.
667 Pereira, S., & Diriwächter, R. (2008). Morpheus awakened. Microgenesis in daydream. In E.
668   Abbey & R. Diriwächter (Eds.), *Innovative genesis: Microgenesis and the constructive mind in*
669   *action* (pp. 159–185). Charlotte: Information Age Publishing, Incorporated.
670 Pontalis, J.-B. (1984). Scénario Freud, Scénario Sartre. In J.-P. Sartre (Ed.), *Le scénario Freud*
671   (pp. 9–23). Paris: Gallimard.
672 Rorschach, H. (1987). *Psychodiagnostic: Méthode et résultats d'une expérience diagnostique de*
673   *perception, interprétation libre de formes fortuites*. (A. Ombredane & A. Landau, Trad., C.
674   Beizmann, Éd.) (Original work published 1947.). Paris: Presses universitaires de France.

Layout: **T1 Standard Unicode**
Chapter No.: **8**
Book ID: **328515_1_En**
Date: **3-7-2015**   Time: **2:08 pm**
Book ISBN: **978-3-319-21093-3**
Page: **18/19**

Roudinesco, E., & Plon, M. (2011). *Dictionnaire de la psychanalyse (Original publication 1997)*. Paris: Fayard.

Sartre, J.-P. (1940). *L'imaginaire. Psychologie phénoménologique de l'imagination*. Paris: Gallimard.

Sartre, J.-P. (1989). *L'imagination* (Original publication 1936.). Paris: Presses Universitaires de France.

Schachtel, E. G. (2013). *Experiential foundations of Rorschach's test* (Original 1966.). London: Routledge.

Schuetz, A. (1944). The stranger: An essay in social psychology. *American Journal of Sociology, 49*(6), 499–507. doi:10.2307/2771547.

Schuetz, A. (1945). The homecomer. *American Journal of Sociology, 50*(5), 369–376. doi:10.2307/2771190.

Sharp, S. E. (1899). Individual psychology: A study in psychological method. *The American Journal of Psychology, 10*(3), 329–391. doi:10.2307/1412140.

Singer, J. L. (2000). Imagination. In *Encyclopedia of psychology,* (Vol. 4, pp. 227–230). Washington DC/New York: American Psychological Association/Oxford University Press.

Singer, J. L. (2005). *Imagery in Psychotherapy* (1st ed.). Washington DC: Amer Psychological Assn.

Singer, J. L. (2014). *Daydreaming and fantasy* (Original publication 1976.). London and New York: Routledge.

Singer, D. G., & Singer, J. L. (1992). *The house of make-believe: Children's play and the developing imagination* (Reprint.). Cambridge: Harvard University Press.

Singer, D. G., & Singer, J. L. (2005). *Imagination and play in the electronic age*. Cambridge and London: Harvard University Press.

Stern, D. N. (1998). *The interpersonal World of the Infant: A view from psychoanalysis and developmental psychology*. London: Karnac Books.

Taylor, M. (1999). *Imaginary companions and the children who create them*. New York: Oxford University Press.

Trevarthen, C. (2012a). Born for art, and the joyful companionship of fiction. In: *Evolution, early experience and human development. From research to practice and policy*, pp. 202–218.

Trevarthen, C. (2012b). Communicative musicality: The human impulse to create and share music. In D. J. Hargreaves, D. Miell, & R. A. R. MacDonald (Eds.), *Musical imaginations: Multidisciplinary perspectives on creativity, performance, and perception* (pp. 259–284). Oxford: Oxford University Press.

Trevarthen, C. (2012c). Embodied human intersubjectivity: Imaginative agency, to share meaning. *Cognitive Semiotics, 4*(1), 6–56.

Valsiner, J. (2014a). *An invitation to cultural psychology*. London: Sage.

Valsiner, J. (2014b). Needed for cultural psychology: Methodology in a new key. *Culture & Psychology, 20*(1), 3–30. doi:10.1177/1354067X13515941.

Valsiner, J. (2014c). What cultural psychologies need: Generalizing theories! *Culture & Psychology, 20*(2), 147–159. doi:10.1177/1354067X13515941.

Valsiner, J., Molenaar, P. C. M., Lyra, M. C. D. P., & Chaudhary, N. (2009). *Dynamic process methodology in the social and developmental sciences*. New York: Springer.

Vermersch, P. (2009). Describing the practice of introspection. *Journal of Consciousness Studies, 16*(10–1), 20–57.

Vygotsky, L. S. (1994). Imagination and creativity of the adolescent. In R. Van der Veer & J. Valsiner (Eds.), *The Vygotsky Reader (Original publication 1931* (pp. 266–288). Oxford: Blackwell Publishing.

Vygotsky, L. S. (1997). Interaction between learning and development. In M. Gauvain & M. Cole (Eds.), *Readings on the development of children* (pp. 29–36). New York: W. H. Freeman and company.

Vygotsky, L. S. (2004). Imagination and creativity in childhood. *Journal of Russian and East European Psychology, 42*(1), 7–97.

Wall, S. (2006). An autoethnography on learning about autoethnography. *International Journal of Qualitative Methods*, *5*(2), Article 9.

Winnicott, D. W. (1994). *Holding and interpretation: Fragment of an analysis*. New York: Grove Press.

Winnicott, D. W. (1996). *Therapeutic consultations in child psychiatry*. London: Karnac Books. (New edition).

Zittoun, T. (2008). Janet's emotions in the whole of human conduct. In R. Diriwaechter & J. Valsiner (Eds.), *Striving for the whole: creating theoretical synthesis* (pp. 111–129). Piscataway: Transaction publishers.

Zittoun, T., Aveling, E.-L., Gillespie, A., & Cornish, F. (2012). People in transitions in worlds in transition: Ambivalence in the transition to womanhood during World War II. In A. C. Bastos, K. Uriko, & J. Valsiner (Eds.), *Cultural Dynamics of Women's Lives* (pp. 59–78). Charlotte: Information Age Publishing.

Zittoun, T., & de Saint-Laurent, C. (2015). Life-creativity: Imagining one's life. In V. P. Glăveanu, A. Gillespie, & J. Valsiner (Eds.), *Rethinking creativity: Contributions from cultural psychology* (pp. 58–75). Hove/New York: Routledge.

Zittoun, T., & Gillespie, A. (2012). Using diaries and self-writings as data in psychological research. In E. Abbey & S. E. Surgan (Eds.), *Emerging Methods in Psychology* (pp. 1–26). New Brunswick/London: Transaction Publishers.

Zittoun, T., & Gillespie, A. (2014). Sculpture and art installations: Towards a cultural psychological analysis. In B. Wagoner, N. Chaudhary, & P. Hviid (Eds.), *Cultural psychology and its future: Complementarity in a new key* (pp. 167–177). Charlotte: Information Age Publishing.

Zittoun, T., & Gillespie, A. (2015a). *Imagination in human and cultural development*. London: Routledge.

Zittoun, T., & Gillespie, A. (2015b). Integrating experiences: Body and mind moving between contexts. In B. Wagoner, N. Chaudhary, & P. Hviid (Eds.), *Integrating experiences: Body and mind moving between contexts* (pp. 3–49). Charlotte: Information Age Publishing.

Zittoun, T., Valsiner, J., Vedeler, D., Salgado, J., Gonçalves, M., & Ferring, D. (2013). *Human development in the lifecourse. Melodies of living*. Cambridge: Cambridge University Press.

Author Query Form

| Book ID : | **328515_1_En** |
| Chapter No.: | **8** |

Springer
the language of science

Please ensure you fill out your response to the queries raised below and return this form along with your corrections

Dear Author
During the process of typesetting your chapter, the following queries have arisen. Please check your typeset proof carefully against the queries listed below and mark the necessary changes either directly on the proof/online grid or in the 'Author's response' area provided below

Query Refs.	Details Required	Author's Response
AQ1	Please confirm if the section headings identified are correct.	
AQ2	Please check the clarity of the sentence 'Hence, Jerome Singer… sessions'.	
AQ3	References Freud (1999), Rommetveit (1985), Singer (1976/2014), Cohen and Taylor (1976) are cited in the text but not provided in the reference list. Please provide the respective references in the list or delete these citations.	
AQ4	Reference Roudinesco and Plon (2006) has been changed to Roudinesco and Plon (2011), so that this matches the citation. Please check and amend if necessary.	
AQ5	Please check the phrase '80s of the 20's century' in the sentence 'Second, in…century'.	

MARKED PROOF

Please correct and return this set

Please use the proof correction marks shown below for all alterations and corrections. If you wish to return your proof by fax you should ensure that all amendments are written clearly in dark ink and are made well within the page margins.

Instruction to printer	Textual mark	Marginal mark
Leave unchanged	· · · under matter to remain	(✓)
Insert in text the matter indicated in the margin	⋏	New matter followed by ⋏ or ⋏⊘
Delete	/ through single character, rule or underline or ⊢——⊣ through all characters to be deleted	⌀ or ⌀⊘
Substitute character or substitute part of one or more word(s)	/ through letter or ⊢——⊣ through characters	new character / or new characters /
Change to italics	— under matter to be changed	⌣
Change to capitals	≡ under matter to be changed	≡
Change to small capitals	= under matter to be changed	=
Change to bold type	∿ under matter to be changed	∿
Change to bold italic	≈ under matter to be changed	≋
Change to lower case	Encircle matter to be changed	≢
Change italic to upright type	(As above)	⌿
Change bold to non-bold type	(As above)	⫪
Insert 'superior' character	/ through character or ⋏ where required	⋎ or ⋋ under character e.g. ⋎² or ⋋²
Insert 'inferior' character	(As above)	⋏ over character e.g. ⋏₂
Insert full stop	(As above)	⊙
Insert comma	(As above)	،
Insert single quotation marks	(As above)	⋎ or ⋋ and/or ⋎ or ⋋
Insert double quotation marks	(As above)	⋎ or ⋋ and/or ⋎ or ⋋
Insert hyphen	(As above)	⊢⊣
Start new paragraph	⌐	⌐
No new paragraph	↪	↪
Transpose	⊔⊓	⊔⊓
Close up	linking ‿ characters	‿
Insert or substitute space between characters or words	/ through character or ⋏ where required	⋎
Reduce space between characters or words	| between characters or words affected	↑