

Sociology of Crime and Criminology: Towards a Unified Theory

(Model Visualisation)

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Introduction

In 2006 (p. 5) Schulz surmised that “[I]f the state of criminological theory could be assessed in quantitative terms, little would be left for improvement. Today there is a maze of academic contributions to the different strands of criminological thought.” Since then about 15 years have passed in which criminology has further developed. And the interest in the field has grown again. However, apart from minor exceptions (e.g. child justice), in general the impact of criminological theorising on public policy is insignificant. “No explanation consistent with a disciplinary perspective seems to have the ring of truth” (Gottfredson and Hirschi, 1990, p. 3). The positivist theory driven paradigm may have to do with this. The quest for the best theory in term of parsimoniousness has us looking for a specific type of explanations. Gottfredson and Hirschi’s self-control theory is a prime example in point. Their theory is parsimonious to the extreme, and its core mechanism, low self-control, is proven to be a strong predictor of a specific category of action (crime). However, to the extent that predictor variables of the many theories around each explain only a portion of the variance, the theories cannot be – exclusively – true. If theories make only different, but not contradictory predictions, they can be combined through integration. What is more, criminological theories can be classified according to their location in respect of the divide between macro- and micro-theories. Then, a central, unifying approach to integration should be able to combine micro- and macro-theory. Based on the assumptions discussed hereafter, I want to suggest such approach borrowing from Coleman’s ‘bathtub model’.¹ The explication of this model will proceed step by step, beginning with a visualization of Durkheim’s mantra that social facts (phenomenal propositions of the social world) can only be explained by other social facts.

Assumptions

The following discussion is based on two assumptions. The first one holds that the sociological explanation depends on human agency. The second assumption is that human agency operates somehow or other through rational choice:

- **Sociological explanation:** Sociology aims at the explanations of collective facts or phenomenal propositions (social facts), but cannot proceed directly from one macro-level variable to another. The ‘production and reproduction of society’ requires an interim consolidation

¹ This model has been used and refined by Esser (1999) for the visualisation of not only the link between micro- and macro-levels of social facts and human behaviour, but also the explication of sociological thought and their location in respect of the divide between macro- and micro-theories. In this text, which works with the same assumptions, and thus owes much to Esser (1999), the same has been done in respect of specific criminological theories.

at the micro-level of human action. This requires a three-step sequence, namely (1) the reconstruction of the social situation of relevance for actors in a given opportunity structure; (2) the application of a theory of action, which can explain the action in the precise situation (the theory of action provides the logic of selection); and (3) the transformation of the effects of individual action to a collective phenomenon (the logic of aggregation). Social situations are chains of explaining and predicting social phenomena (above); each (explained) social situation is the antecedent peripheral condition for a subsequent situation.

- **Action theory:** An action theory connects logically actors with action, and action with consequential collective results. It is, therefore, indispensable to operate with an action model, which consists of a causal and a consequential part, and a precise, functional/causal link (if-then). For this exposition rational choice theory is taken as the best alternative. In line with current understanding, rational-action theory is explicated in terms of *expectancy x value* equations, and presupposes the importance of the social situation, which provides the alternative, or the alternatives of action (opportunity structure), which, or from which, an individual may select. The basic assumptions of *expectancy x value* theory are:
 - Any action represents a decision for enactment among **alternatives**;
 - Selected action has always **consequences/outcomes**;
 - Consequences may be perceived **positive, negative, or neutral** by the precise actor
 - Consequences occur with different probabilities, which the actor has stored as **expectancies**
 - Alternatives for action are being **evaluated/weighted**
 - Actors choose and enact the alternative, which offers the **maximal**/highest weight.²

According to this model, individuals act against the backdrop of their intentions and their assessment of expectancy and value of alternatives. An actor decides and acts according to the consequences of his action in light of internal attitudes and external conditions of relevance in the decision-making situation. *Expectancy* and *value* are the peripheral conditions, which represent a relevant sector of the social situation. The social situation is a necessary element in this explanation, since without alternatives there will be no choice.

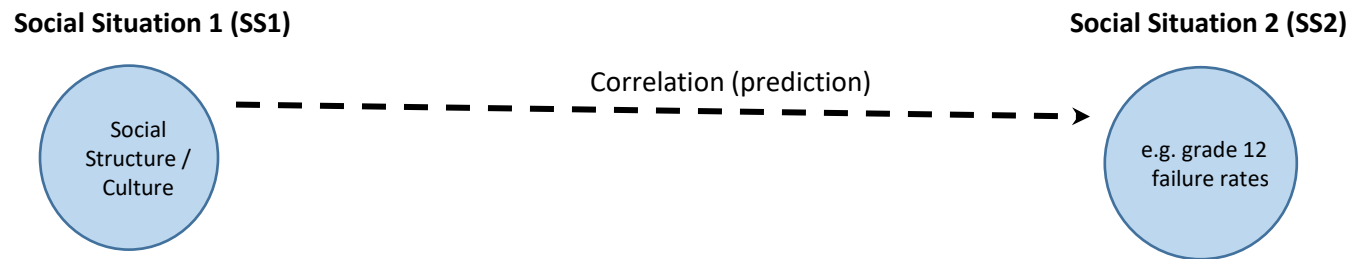
An action model which is based on decision making allows factoring-in the relevant elements of the current situation. This is not the case with behavioural action models, which explain behaviour as a function of the learning history of the person. Thus, situations, in the context of behavioural theories, are only more or less complex biographies of learning. With the absence of intentional action from the theoretical substance of behavioural theories, these theories do not mirror a phenomenon humans understand as an essential element of their existence, namely the (re)cognition of, and reaction in response to, unfolding opportunities. *E x U-model* of rational action integrates this and adds another advantage

² See: Esser, Soziologie. Spezielle Grundlagen, Bd. 1: Situationslogik und Handeln, p. 248: *Expectancy x value* theory is in a formal sense a variant of rational action theory. In the context of selection, i.e. framing, orientation and script selection, we don't deal with rational choice in a substantial sense. Actors do not necessarily (even seldom) 'consciously' calculate, and they aren't perfectly informed either. Human beings don't perceive, in this sense rational choice theory is contra-factual, the world "as is" in its complexity, instead they dispose only of certain memorized mental representations, which are necessarily simplifications. These simplifications reflect partly the limited, the 'bounded' rationality of the actor.

for the modelling of human behaviour: vicarious learning. Knowledge (etc.) which is required for the selection among alternatives can be acquired via own experience, or from other sources, for instance a textbook. Thus, cognition and the subjective definition of the situation (below) provide the link between any contemporary situation and action.

Sociology of Crime (Figure 1): the aggregate (molar) level

In the classical sense of sociology, the sociology of crime deals with the question how social facts (social structure and culture), e.g. housing conditions, which have been prevalent at a certain point in time, and significantly improved in a given year (Social Situation 1), relate to one other social facts, e.g. grade 10 failure rates in the following year (Social Situation 2); this includes the question of causal relations (cause and effect).



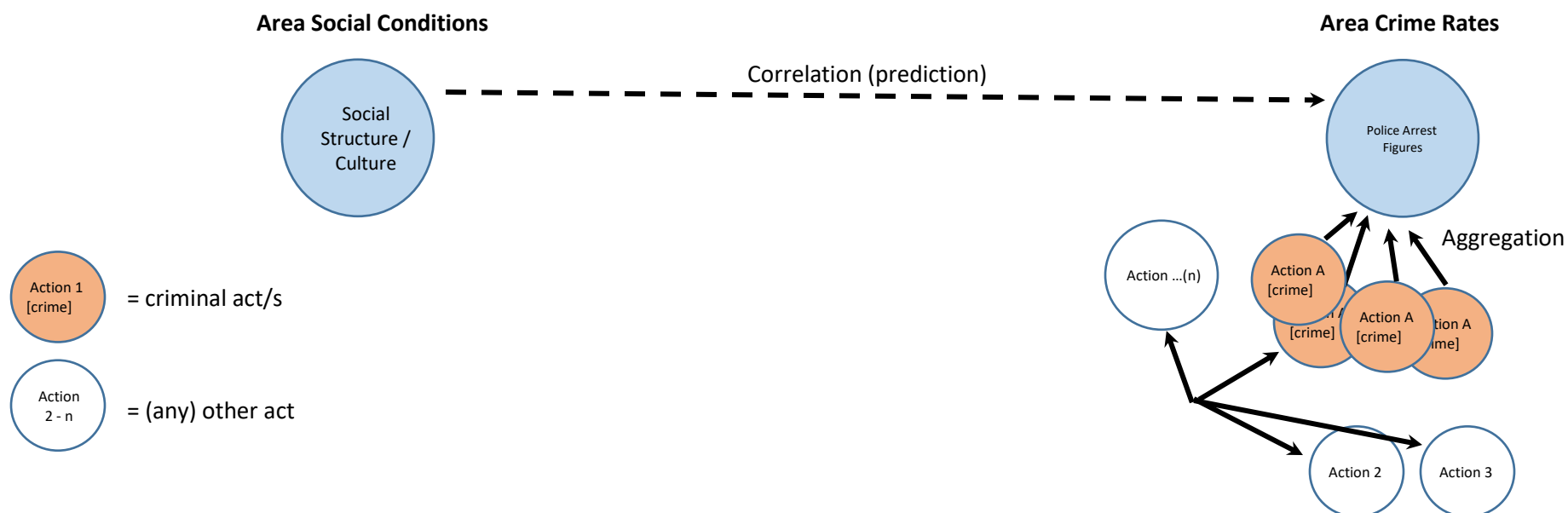
Notes:

SS1= Social Situation 1
SS2 = Social Situation 2
Corr. = Correlation
Pred. = Prediction

1. The direct link between Social Situation 1 (SS1) and Social Situation 2 (SS2) is purely mathematic/statistical – and therefore “dashed”
2. The correlation of SS1 and SS2 is hinged on a spacio-temporal relation: At any time, which we want to call SS1, a given social situation comes with a specific set of social facts, for instance housing conditions. At SS1 these housing conditions are ‘accompanied’ by a specific school failure rate. If housing conditions are then improved, the measure of school failures, taken at a later point in time (SS2), may have changed. The calculation of any change can be expressed as a correlation between for instance housing density and school failure.
3. Importantly, however, housing conditions, or also poverty rates, or unemployment rates, to name few more phenomenal propositions of the social world (social facts), do not add anything – directly - to the aggregated numbers of school failures (e.g. grade 12 failure rates), which are represented in Social Situation 2.
4. Failure rates are always the product of aggregation of actual single acts of failures: “Max did not pass, and so didn’t Helvi, nor Penda.”
5. The mathematical relation between SS1 and SS2 is always mediated at the level of the person (micro-mediation: Cook & Campbell, 1979, p. 32; see below).

The micro-mediation of sociological relations (Figure 2.1): Agency and Action

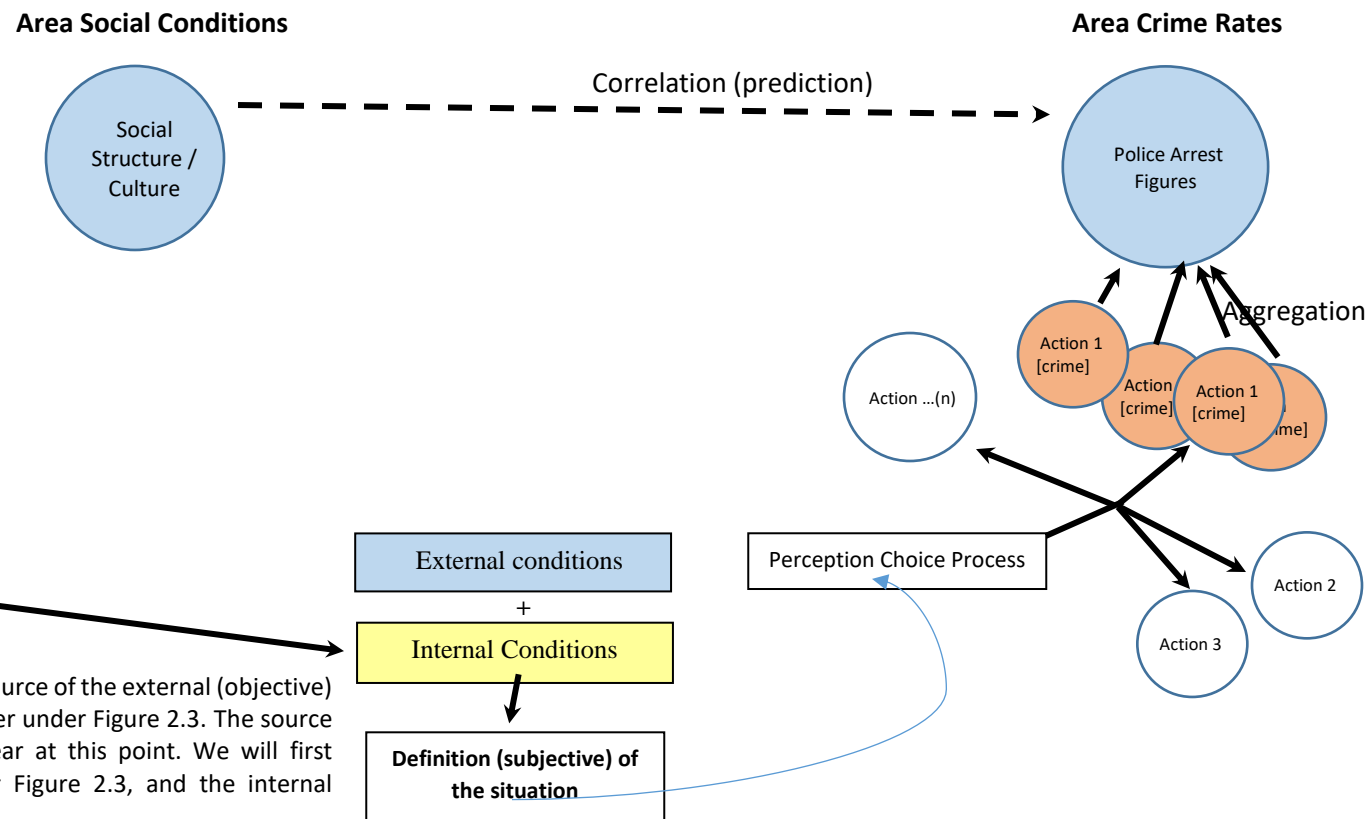
The so-called bathtub-model of the sociological explanation, which goes beyond Durkheim's dictum that social facts can only be explained through other social facts, has been used already by Coleman (1990) and then by Esser (1999); Schulz (2006, 59) has worked with this model in his analysis of Gottfredson and Hirschi's General Theory of Crime (1990). In the following, however, we substitute Area Social Condition (ASC) for Social Situation 1, and Area Crime Rates (ACR), or whichever appropriate term, for Social Situation 2, together with some other nomenclature which Wikstroem (2011) uses in his explication of Situational Action Theory (SAT). The mathematical relation between Social Situation 1 and Social Situation 2, or here ASC and ACR (see note above Figure 1), is always mediated at the level of the person. Area Crime Rates represent the aggregation of individual acts as recorded, first at the level of police stations, then reported to the regional command, and from there to the police headquarters, where they are put together to become the national arrest data from year to year. The police arrest statistic only shows acts of behaviour which have been recognised as meeting the definitional elements of a (any) criminal offence (Action 1 [crime]), none of the countless other acts (Action 2 – (n)) of behaviour carried out from moment to moment in our communities is noted.



With the realisation that the social facts at molar level are always the outcome (directly or indirectly) of human action, the questions about the antecedent factors informing these human actions comes to the fore. As listed among our assumptions, we assume that human beings are actors endowed with agency, i.e., decision making ability. Further we assume that the human actor decides in a rational manner, which means that from among the feasible alternatives of action within a given opportunity structure, the alternatives with the highest utility will be selected for enactment.

The micro-mediation of sociological relations Figure 2.2): Definition of the situation (setting) and the selection of action

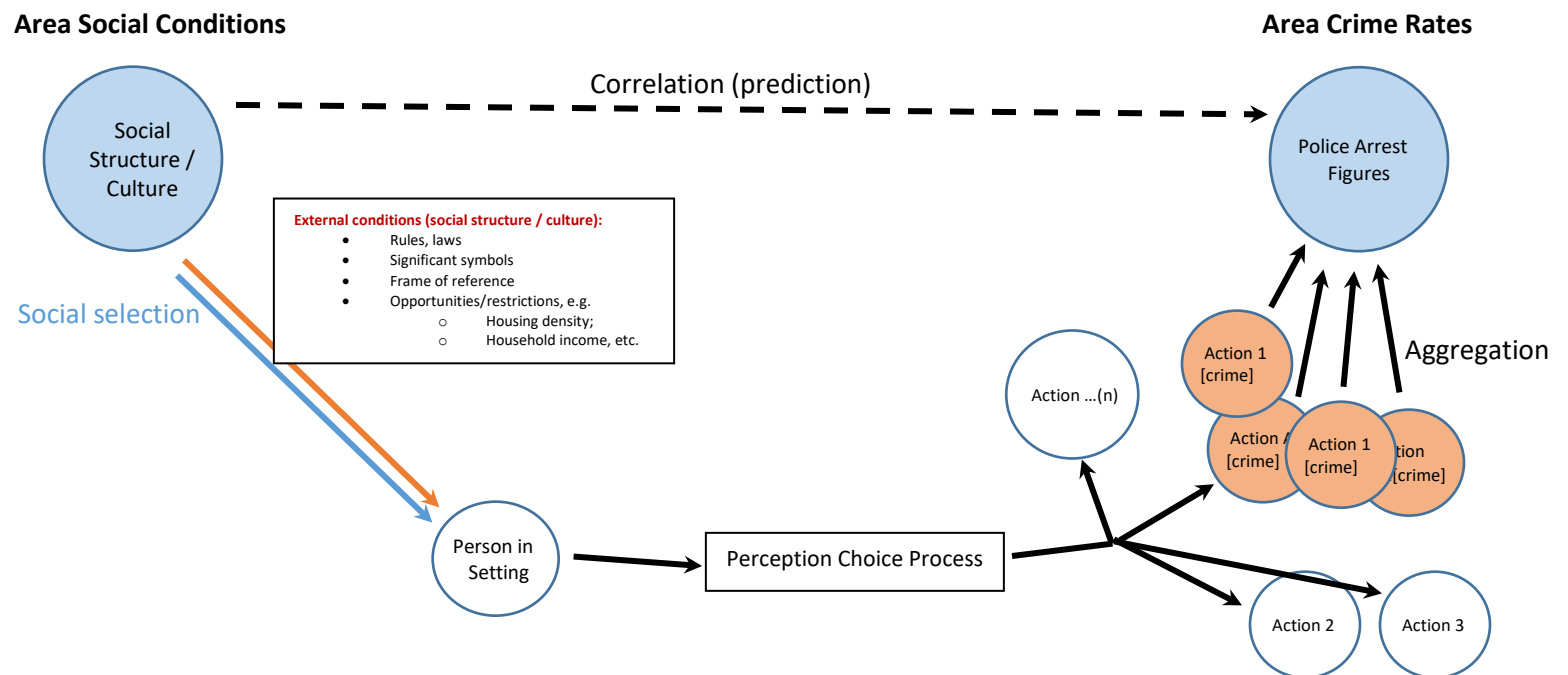
The perception choice process (PCP) encompasses the (subjective) definition of the situation (setting) and the selection of action. This is a mental achievement, which precedes every enactment of an intended action, and consists of three phases. First, there is the genesis of the external (objective) conditions, and the internal (subjective) conditions. The external conditions represent the history of the ASC (e.g. social structure and culture), and the internal conditions denote the biographic stage of the actor at the time of decision making. The subjective definition of the situation is the mental integration of external and internal conditions, and based on this the actor selects an act for enactment, which as rational outcome is a function of the actor's *expectancy x value* equation; the actor selects the highest value among the action alternatives in the opportunity structure. In this Figure 2.2 we find the source of the external conditions, i.e. the ASC. What is missing here, is the person – the source of the internal conditions.



Social structure and culture are the source of the external (objective) conditions, which we discuss hereafter under Figure 2.3. The source of the internal conditions is not clear at this point. We will first discuss the structural effects under Figure 2.3, and the internal conditions under Figure 2.4.

The micro-mediation of sociological relations (Figure 2.3): External (objective) conditions

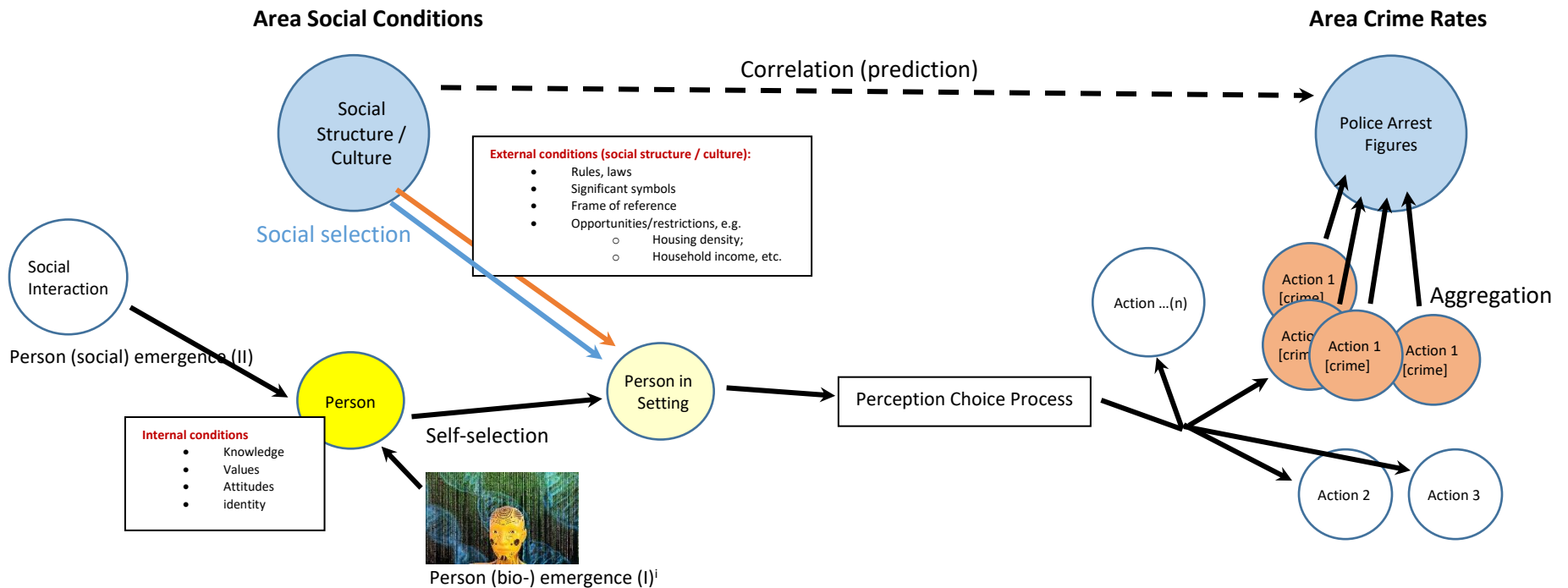
The definition of the situation, which becomes relevant for the forming of the intention to act and the enactment, the PCP, is carried out by a person in context, or for another word, the person in setting. We say that the person in setting arrives in a specific setting as a function of the area social condition (social structure, etc.) in which she moves. For example, a person, poverty-stricken, will not appear at a gala diner of super riches (at least not under normal circumstances); it is in this sense that the environment in which we live exerts a (social) selection process, which limits opportunities and restrictions for action (blue arrow). The Area Social Conditions hold the external conditions, which - as held above – via cognition are made available for decision making. External conditions are elements of social structure, culture, which include also legal norms, and artefacts, which as housing and the respective conditions thereof, or also employment opportunities, represent opportunities and restrictions.



Above we have said that for the definition of the situation the actor integrates external and internal conditions, the PCP. The internal conditions, that is, the biographic stage of the actor at the time of decision making, are held by the person as a social and biological “compound.” A person, and this refers to any human being outside any specific setting (yes, this requires a bit of imagination), emerges - from conception - in a process, which embeds the biological individual in a social setting, in which individuals in community maintain a continuous process of social interaction.

The micro-mediation of sociological relations (Figure 2.4): Internal (subjective) conditions and the emergence of the person

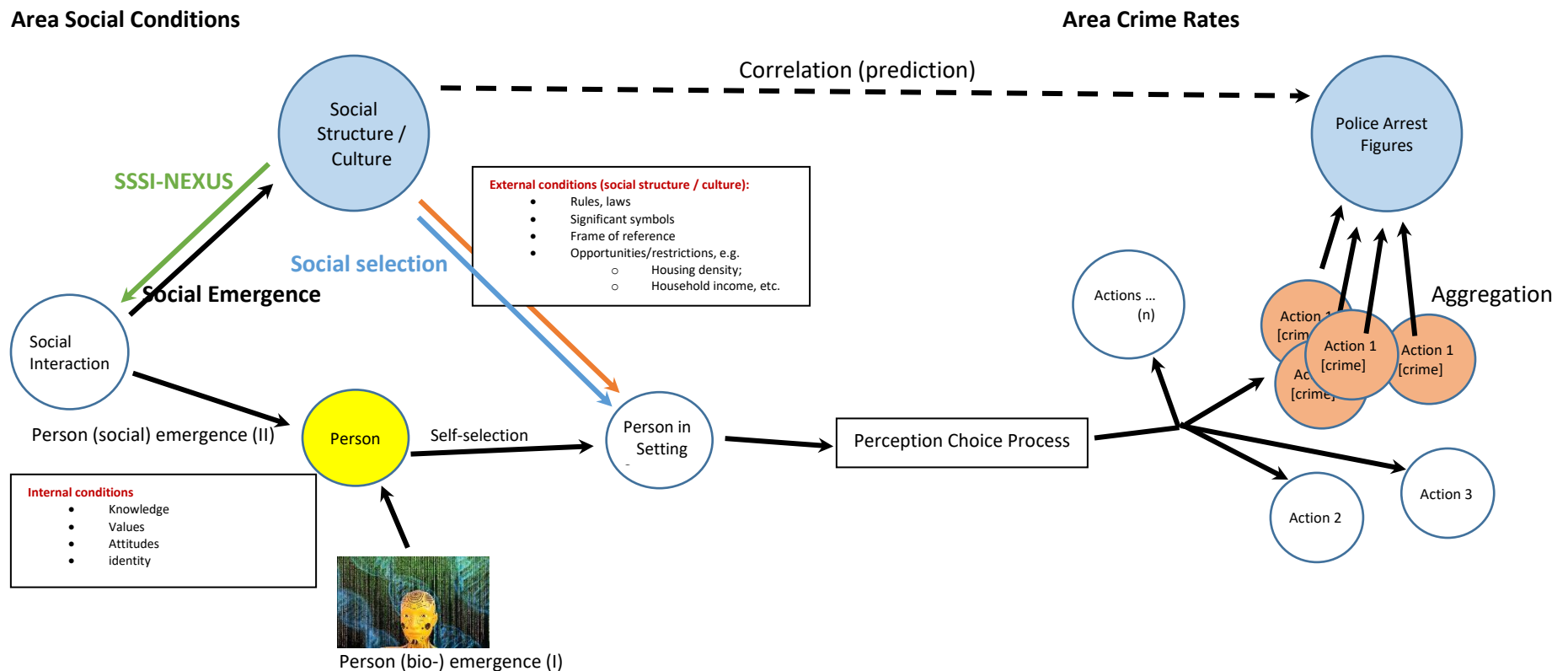
The internal (subjective) conditions are a product of the continuously emerging person. They consist of the accumulated knowledge, the values, attitudes, and the identity of the person. We have said that they denote the biographic stage of the actor at the time of decision making. This stage is always present, and available for the person in any setting, and the PCP. The person, a bio-social entity for lack of a better word, emerges through two intertwined processes, namely first, the biological emergence, and second the social emergence. The biological emergence commences with the act of conception, and from this moment onwards, genes and environment (G x E) interact. This process continues until the end of the biological life of the person. The environment, however, is not just a biochemical context, not even before birth. Into the amniotic fluid reach already the artefacts of social interaction, the voice of the mother, and the voice of the persons around her. The foetus analyses these 'data' and interprets them, a process by which they obtain meaning. As much as the gene environment interaction continues until the biological death of the person, the person will remain embedded in the social interaction until death occurs. This person move from situation (setting) to situation, as the result of choices made; we decide whether we will go to the theatre or for dining in a restaurant, of the one before the other. This is meant by self-selection.



Beyond the G x E interaction, which indeed looks in the first place at the dependence of gen-expression on environmental factors, the field of behavioural genetics looks at the question how biological and the social mutually influence each other, i.e. nature through nature. What is left to insert into our figure is the link between molar level and the micro-level, the sociological level of ASC and ACR, and the level of the person and her social interaction.

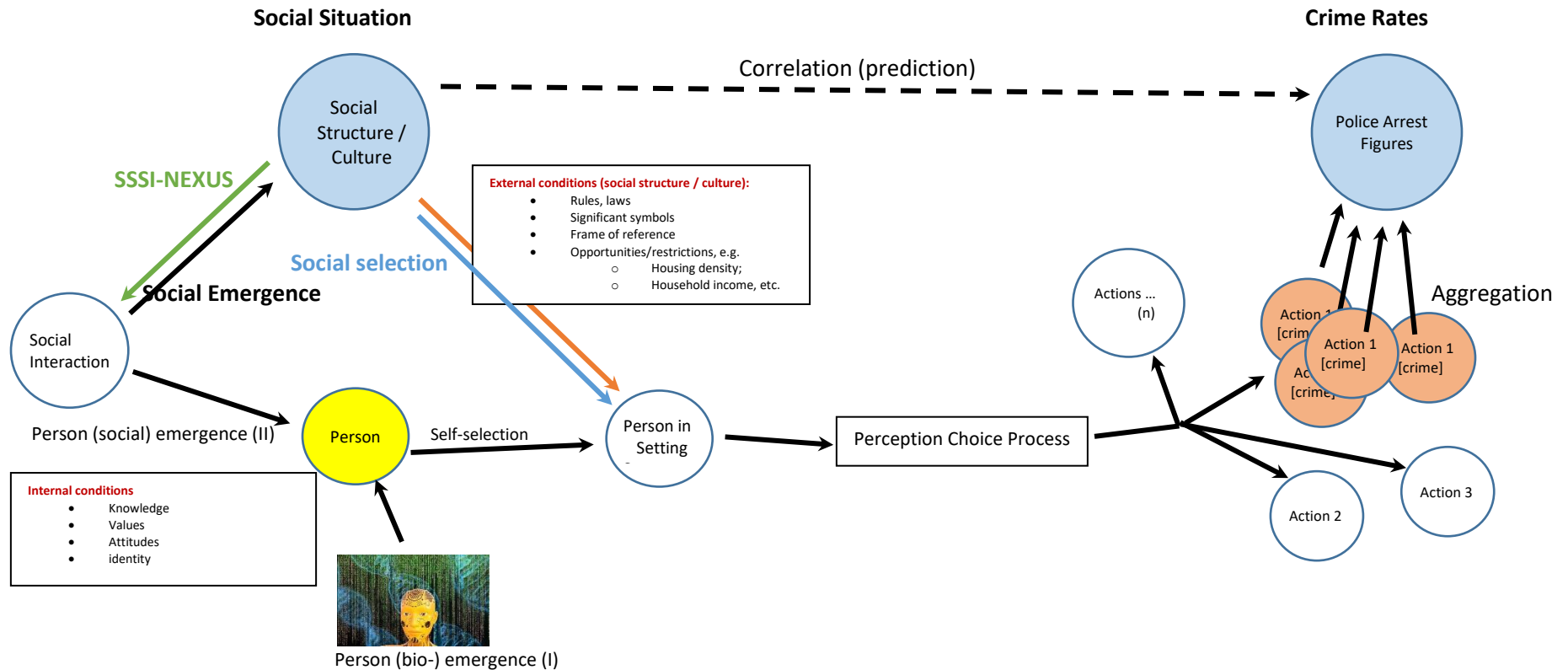
The micro-mediation of sociological relations (Figure 2.5): Social emergence & Social-Structure-Social-Interaction NEXUS (SSSI-NEXUS)

Without the biological person, there would be no social person, and without social persons there would be no social interaction. By extension then, without social interaction there would be no artefacts, and this means in other words, there would be no area social conditions, viz. no social structure, and no culture. The molar concepts at the classical sociological level of social facts is entirely dependent on the actors. This is meant by 'social emergence'. However, the relation between social interaction and ASC is not a one way relation. In fact, there is a nexus between ASC and social interaction, in the sense that specific ASC inform the content (object) of social interaction in terms of shared assumptions, nature of reality, motifs, etc. This is called in this figure 2.5 the Social-Structure-Social-Interaction NEXUS (SSSI-NEXUS). The latter nexus has been discussed by Peter M. Blau (1960) in "Structural Effects".



We have come full circle. The scheme is however not complete, and does not capture all phenomena which make our social reality. Again, the scheme is very helpful as it provides loci for the location of different factors which explain variation in behaviour, and how they may be imagined to interact.

Sociology of Crime & Criminology (Figure 3): The full picture

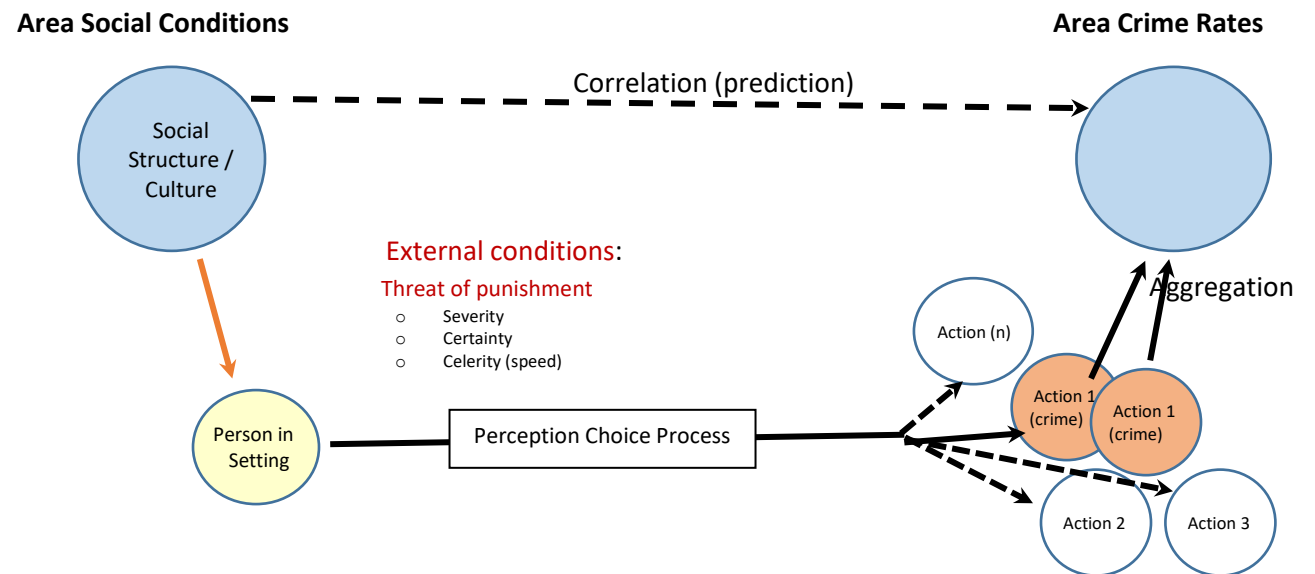


In the following, we will explicate various criminological theories against the backdrop of figures 1 – 2.5. Mostly, the figures on represent the participating theoretical substance, not however, the undergirding assumptions. We will begin with deterrence theory (classical/neo-classical criminology) Figure 4.1, continue with social learning theory (Sutherland, Akers, Bandura) Figure 4.2, social-structure-social-learning (Akers) Figure 4.3, control-theory (Hirschi) Figure 4.4, and biosocial theory (Moffitt) Figure 4.5 below.

Deterrence Theory (Figure 4.1)

Although scientific confirmation of deterrence theory comes with so many provisos, which render the effectiveness of deterrence dependent public policy very limited, this theory has a lot of appeal among policy makers. This, arguably, has to do with the fact that it appears plausible to the layman's explanation of human behaviour. Deterrence theory is a typical sociological theory: its theoretical interest is located at the aggregate level, whereas the analytical interest lies at the individual level. Theoretically, policy makers who increase the severity of punishment expect an incidence reduction, and consequently lower crime rates. Analytically they hold that the threat of more severe punishment negatively changes the cost-benefit calculation of any would be offender, and that therefore less people would thus get involved in crime.

For the visualization of deterrence we only need a part of Figure 3 above. Note however, that it has to be read in conjunction with Figure 2.2, which explicates what happens during the Perception-Choice-Process.



If we want to make use of Figure 3 (or parts of it) for the explication which conceptual chores of the full picture are forming part of the theoretical substance, we need first to analyse the theoretical concept, identify the theoretical variables, and place these variables at the correct location in the figure. Let's do this for deterrence theory:

If we analyse the deterrence concept, we realise that deterrence theory, as far as general deterrence and specific deterrence are concerned, only operates with assumptions/concepts regarding the **external (objective) conditions**. The concept threat of punishment falls under **culture**, more precisely,

legal norms, i.e. the criminal law, and covers the mechanism “severity of punishment.” Certainty and speed of punishment fall under restrictions and opportunities. An opportunity may be the absence of police on the beat, whereas an example of restriction may be the experience that with the new patrol cars police moves much quicker than before and will be very able to follow leads. The latter two inform the perception of certainty and swiftness of punishment.

During the course we have learned that deterrence does not work as straightforward as intended. We have seen that the reasons why the deterrence mechanisms are not as effective as assumed, lie in the false assumption of deterrence theory regarding the perception of the certainty of punishment, and regarding the assumed relevance of this perception in the PCP. Explanations why these assumptions are wrong are located outside the theoretical and analytical sphere of the theory, more specifically in the person and the biographic stage at the time of decision making, stage which represents the continuous bio-social emergence of the actor (see Figure 2.4 above).

Social-Learning Theory (Figure 4.2)

We skip the separate discussion of the social learning theory of crime, because this theory has been essentially subsumed by Akers (1998) Social-Structure-Social-Learning (SSSL) theory (below Figure 4.3). The theoretical elements of social learning theory of crime need only a very limited set of components of the full picture (Figure 3):

¹Social learning:

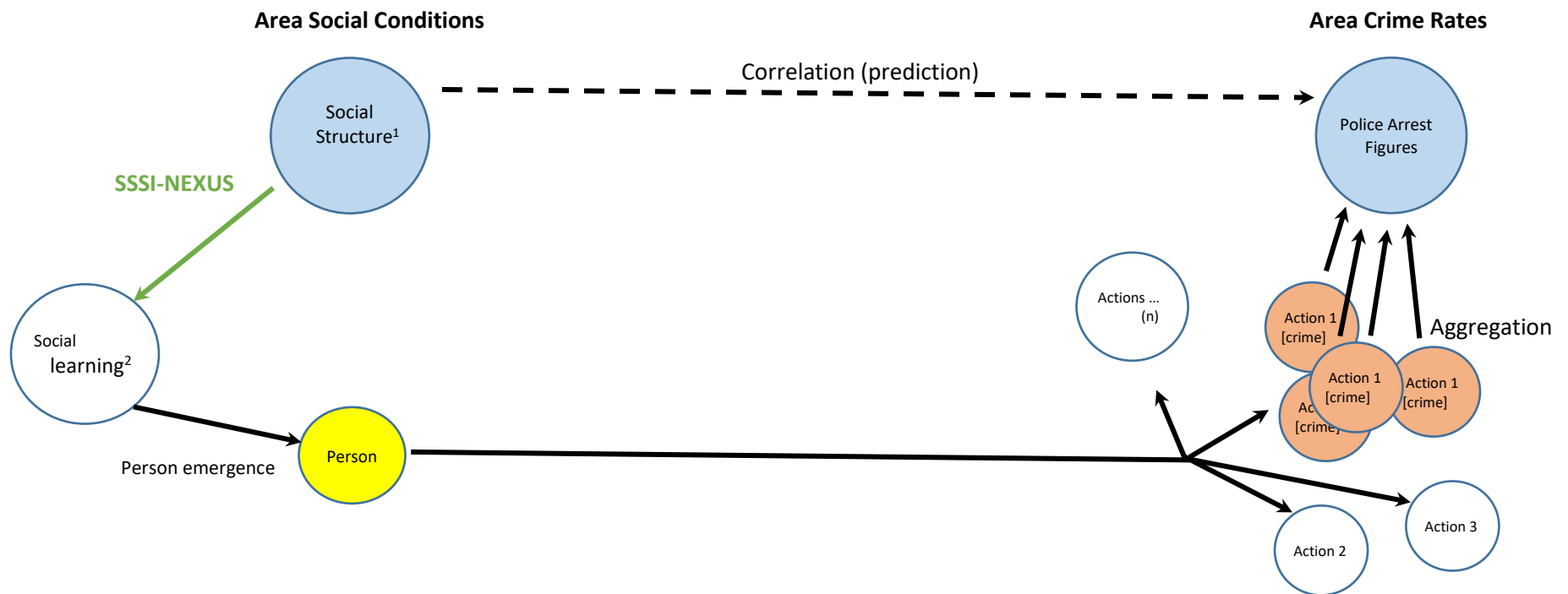
- Differential association
- Definitions
- Differential reinforcement
- Imitation



Social-Structure-Social-Learning (SSSL) Theory (Figure 4.3)

As discussed above, if we want to make use of Figure 3 (or parts of it) for the explication which conceptual chores of the full picture are forming part of the theoretical substance, we need first to analyse the theoretical concept, identify the theoretical variables, and place these variables at the correct location in the figure. This time we want to do this for SSSL-theory; we can take the theoretical elements from Holland-Davis (2006) dissertation “Putting behavior in context: a test of the social structure social learning model”:

As observed in the case of deterrence theory, we can differentiate theoretical and analytical interest also with SSSL-theory. The theoretical interest refers to the relation between social structure and crime rates, whereas the analytical interest covers the relation between social learning and criminal offending. The social structure-social learning (SSSL) model suggests that while characteristics of the social structure in which one lives (location of actors in the social structure), influence individual behavior; they do so indirectly by influencing the social learning process. This suggests that the coordinates of the theory are the **Area Social Conditions**, which host the **social structure**, as well as **social interaction**, which includes the **social learning process**. The statement that the social structure influences the social learning process, thus denotes in turn the SSSI-Nexus. Finally, the (social) emergence of the person is mediated through the social learning process, which is a case of social interaction.



The concepts and the variables, taken from Holland-Davis (2006, 30 - 32)³

¹ Social Structure:

- Structural correlates: Differential Social Organisation
- Sociodemographic correlates: Differential social location in the social structure (Age, Gender, Race, SES, Religion)
- Theoretically defined structural causes: Social Disorganisation, Conflict
- Differential Location in Primary, Secondary & Reference Groups (Family, Peers, School, Work, Church, Media)

The social structural variables are hypothesized to inform how the independent variables of the social learning processes play out.

² Social learning:

- Differential association
- Definitions
- Differential reinforcement
- Imitation

The social learning processes offer values (morals), motivation, techniques, etc., which contribute to the emerging person. These aspects form part of the knowledge, values, attitudes, as well as identity, that is, the internal subjective conditions, which are factored in the PCP. In comparison with the more general and inclusive PCP (inclusive because it subsumes the social learning), for the SSSL-theory the relation of the social learning process variables to actual criminal behavior remains statistical, because defined as a function of the variation in the measures of these variables. Also, because the SSSL-theory does not cover any other theoretical concepts, it is now obvious that the biological emergence does not play a role. Likewise, social selection and self-selection are not discussed by the SSSL-theory. Importantly, the role of the ASC (social structure and culture) as external (objective) condition, which in the complete picture (Figure 3 + Figure 2.2) is factored in the PCP, does not play any role. Then, finally, the PCP is not theoretically excluded, to the contrary, Akers (1998) presupposes the operation of the situational mechanism, as he confirms the importance of rational choice in decision making. But PCP does not form part of the theoretical substance of SSSL-theory.

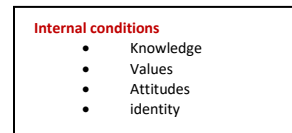
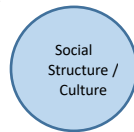
³ Note that on pp. 30 – 32 Holland-Davis (2006) discusses the theoretical chores of Akers' SSSL-model. Her project however, made use of a data set which was collected by Akers in the mid-1970s, for a study designed only for the purpose of testing social learning theory. Therefore structural variables were only collected coincidentally, and not purposefully. The location of the schools of whose pupils self-reported antisocial behaviour was collected, provided the only structural level data.

Adolescence-Limited and Life-Course Persistent Antisocial Behaviour: A Developmental Taxonomy (Figure 4.4)⁴

Moffitt (1993) theorises the changing incidence of criminal acts in favour of the hypothesis that adolescence brings an increment in the number of people who are willing to offend. As a corollary follows that any offender population divides into two different sub-populations, namely a small group of persons engaging in antisocial behaviour at every stage of life, life course persistent offenders, and a larger group of persons with careers of shorter duration, that is adolescent limited offenders (p. 676). Her dual taxonomy allows unravelling the otherwise intriguing relation between adult antisocial – and by extension criminal – behaviour and childhood antisocial behaviour, which Robins (1978) characterised as follows: “Adult antisocial behaviour virtually requires childhood antisocial behaviour, (yet) most antisocial youths do not become antisocial adults.” Based on the documented life-course stability of antisocial behaviour life course persisters can be discerned from the adolescence limited offenders, leaving the information typically available at the time of adolescent arrest, like offence type, age, sex, race, class, etc. behind, and bringing the focus on knowledge of an adolescent’s pre-adolescent behaviour. Against this background Moffitt provides a different theory of criminalisation for each taxon:

Life-course persistent offenders

The theoretical foreground is the emergence of the person. Here biological emergence and social emergence are highlighted. Antisocial behaviour is said to be linked to neuropsychological impairment, supported by evidence that life course persisters suffer from deficits in neuropsychological abilities, namely poor verbal and “executive” functions. Besides the link between poor verbal and “executive” functions and criminal behaviour, the theory hypothesises few factors so influencing infant neural development, e.g. heritability, as well as diverse pre-, peri- and post-natal factors. The concept “neuropsychological” refers to the neurological, viz. biological, basis of the person, which highlights the influence of anatomical structures and physiological processes on psychological characteristics such as temperament, behavioural abilities. These processes are eventually also informed by poor prenatal nutrition, pre- and post-natal exposure to toxic deprivation of nutrition. However, Moffitt as well underlines the importance of social interaction in the etiology, maintenance and redress of neuropsychological deficits. This is where stimulation and affection come into perspective. To the extent that the social emergence thrives on the social interaction with the environment the question whether the developing child is born into supportive environments gains importance. As it stands children with cognitive and temperamental disadvantages are not randomly assigned to more or less supportive environments. Moffitt states: “Vulnerable infants are disproportionately found in environments that will not be ameliorative because many sources of neural mal-development co-occur with family disadvantage or deviance” (1993, p. 681), whereby family adversity also includes socio-economic status. The forming of the internal conditions promoting an antisocial style hinges on the evocative interaction which relates a child’s behaviour to the distinct responses it evokes from others. In short, child and environment may be in a mutually reinforcing feedback loop, as pre-existing dispositions may evoke responses from the environment which render the children more vulnerable to criminogenic influences.

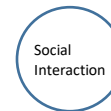


Adolescence limited offenders

The etiology of crime by adolescence limited offenders criminal act as a means to attain mature status, together means grows from an interplay between biological and concept refers to the secular changes in health and work, which have lengthened the duration of adolescence. Whereas with modernisation maturity arrived at an earlier stage



according to Moffitt draws on the agency of the actor and the with its consequent power and privilege. The ability to recognise social emergence of the person , which produce the so-called



selection of the offending as such a maturity gap. This

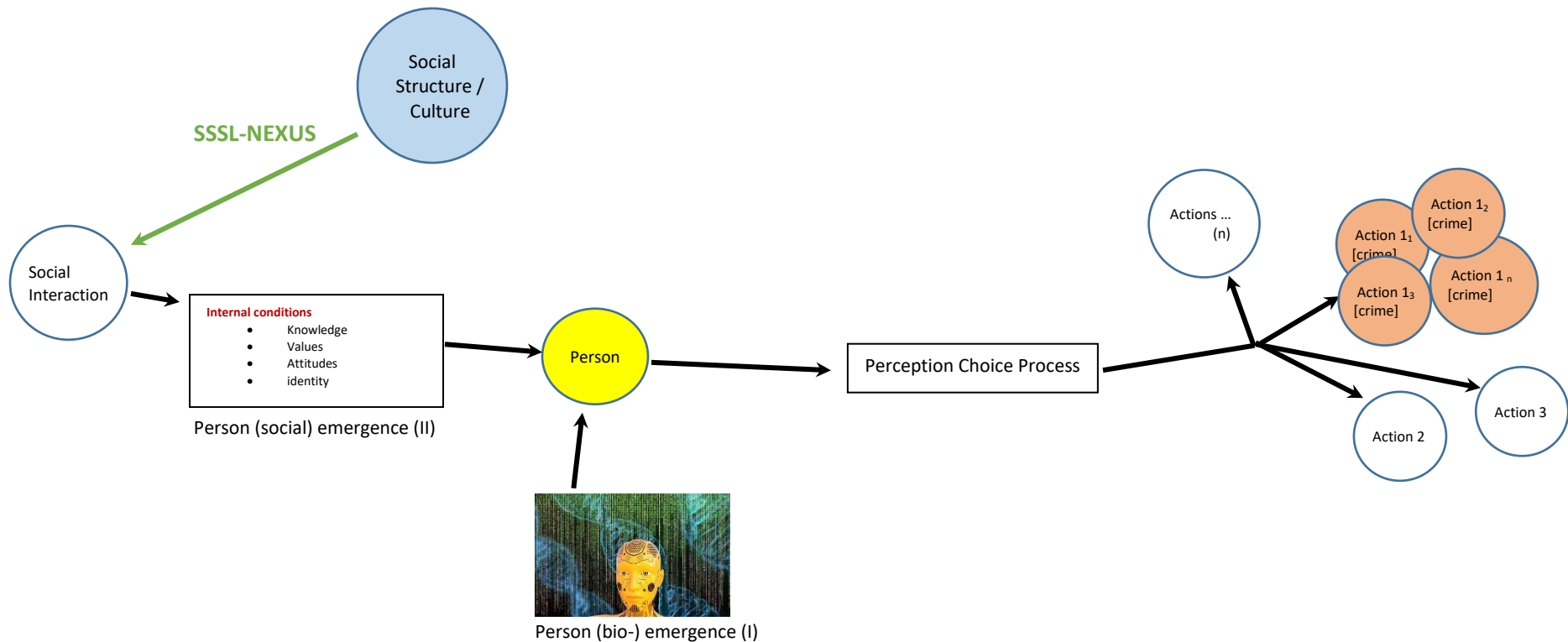
⁴Against Moffitt’s (1993) “dual taxonomy” the figure shows its limitations as it does not provide visual components which can represent a number of theoretical elements. Albeit, this is not the aim of the visualisation, and the objective here is, as highlighted above, to locate the theories in respect of the divide between macro- and micro-theories.

it delayed the age of labour force participation, which brings about an extended role vacuum for modern teenagers. Although biologically capable to be sexual beings, they have to delay sexuality and most other positive aspects of adult life. By mimicking the antisocial behaviour of their life course persistent peers, which temporarily becomes the

Perception Choice Process

normative group social behaviour of choice, adolescence limited offenders fill the maturity gap.

Area Social Conditions



Bibliography

- Akers, R.L. (1998). *Social Structure and Social Learning: A General Theory of Crime*. Boston.
- Black, T.R. (2003). *Doing Quantitative Analysis in the Social Sciences*. London: SAGE Publications.
- Blau, P.M. (1960). Structural Effects. *American Sociological Review*, Vol. 25, No. 2 (Apr., 1960), pp. 178-193.
- Coleman, J.S. (1990). *Foundations of Social Theory*. Cambridge (Mass.): Belknap Press.
- Cook, T.D. and Campbell D.T. (1979). *Quasi-Experimentation; Design and Analysis Issues for Field Settings*. Boston: Houghton Mifflin.
- Esser, H. (1999). *Soziologie. Spezielle Grundlagen, Bd. 1: Situationslogik und Handeln*. Frankfurt am Main: Campus.
- Holland-Davis, L. (2006). *Putting Behaviour in Context: A Test of the Social Structure-Social Learning Model*. PhD-thesis: UF.
- Moffitt, Terrie E. (1993). Adolescence-Limited and Life-Course Persistent Antisocial Behavior: A Developmental Taxonomy. *Psychological Review* 100, pp. 674-701
- Schulz, S. (2006). *Beyond Self-Control – Analysis and Critique of Gottfredson and Hirschi's General Theory of Crime (1990)*. Berlin: Duncker & Humblodt.
- Wikström P-O (2011) *Does Everything Matter? Addressing the Problem of Causation and Explanation in the Study of Crime*. In (Eds) McGloin J M, Sullivan C. J & Kennedy L. W. (Eds): *When Crime Appears: The Role of Emergence* London. Routledge.

ⁱ GDJ (PIXABAY.COM)