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# Gains and losses of control: the construct “Sense of Failure” and the competence to “Rescue an Enterprise from Failure”

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## Abstract

**Background:** We posit that nascent entrepreneurs should develop a competence dealing with success and a competence preventing and treating failure. We call these competences “Sense of Success” and “Sense of Failure”. Both a sense of success and a sense of failure (Oser & Volery, ERVET, 4,1: 27-44, 2012) are to be modelled and measured, both are necessary for starting an enterprise. While “Sense of Success” is related to capabilities in launching business ventures, “Sense of Failure” focuses on adverse situations in start-up processes and considers mistakes and shaking situations. We suggest “Sense of Failure” (SoF) being a concept which influences a specific form of problem solving competence, the competence to “Rescue an Enterprise from Failure” (REF).

Whereas REF is the competence to deal with adverse situations during start-up in insecure environments, SoF can be seen as essential precondition, as a source model for REF. For modelling and measuring SoF on the one hand and REF on the other hand, in a first step it is essential to specify the construct (SoF) and the competence (REF).

**Methods:** To validate epistemically the proposed construct SoF and to validate the suggested five step algorithm, we use qualitative material and illustrate each element and each step with statements and passages from interviews conducted with nascent entrepreneurs. The target subjects were Swiss entrepreneurs, eight interviews with successful and eight with failed entrepreneurs were conducted.

**Results:** Although the construct is not tested for its intensity, its regressional influence or its extension, we found adequate material for the existence of each element of SoF and each step of REF. Thus, the requirement to describe the construct “Sense of Failure” and the competence to “Rescue an Enterprise from Failure” appears to be satisfactory given.

**Conclusions:** SoF as a construct and REF as a competence can be seen as necessary psychological requirements to deal with adverse and threatening situation during start up processes in entrepreneurial contexts. The next steps in our research process will be (1) the development of instruments to measure the different variables of SoF and (2) to search for a possible method to measure REF.

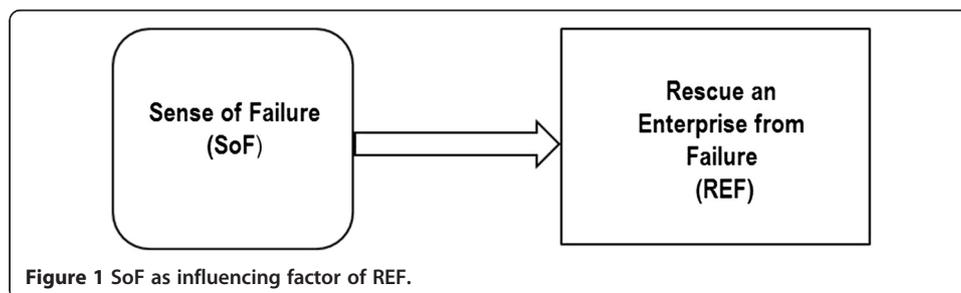
**Keywords:** Entrepreneurship; Start-up; Failure; Competence; Bankruptcy; Rescue of an enterprise; Negative knowledge

## Background

As entrepreneurship is definitively seen as a powerful driver of growth and fortification in modern economy, policy makers claim that “Europe needs more new enterprises and innovation” (European Commission, 2012, p. 12). Entrepreneurship competences are defined as both, specific and cross curricular competencies (EACEA, 2012) which should be imparted and fostered in schools and in vocational training. To prepare young people to tackle today’s economic requirement, we try not only to give them economic basics but also to anchor entrepreneurship in the curricula of secondary II students, of vocational and higher education. To do this we not only claim a high sense of success, but also some of the described competences that deal with the ability to react fruitfully in critical situations. Considering the fact that half of the start-ups exit the market in their first five years of existence (Oser & Volery, 2012), it is fundamental to know how nascent entrepreneurs should (re)act in critical situations, how they can avoid failure and which cognitive aspects, personal attributes, beliefs are relevant in the context of bankruptcy to impart relevant aspects in vocational training. Summarized we identify two aspects being a challenge in research: first, we posit that young people need to develop both an entrepreneurial spirit/entrepreneurial competence and a competence related to failing. Second, as “the essence of entrepreneurship is action” (Morris et al. 2013, p. 352) we claim to concretize entrepreneurial acting in critical situations against the backdrop of failure.

In order to do so, our research plan is to develop a measurement instrument that captures the construct “Sense of Failure” (SoF) which we suppose being a precondition (see Figure 1) for the competence to “Rescue an Enterprise from Failure” (REF) in entrepreneurial start-up phases.

The overriding goal is to prevent from bankruptcy, to diagnose in advance crises and to scaffold entrepreneurs in critical situations. The concrete project consists of three phases. First, we did interviews with failed entrepreneurs in order to understand the dimensions leading to failure. Second, we would like to develop an instrument which we call “Sense of Failure” testing the amount of awareness and the alertness of entrepreneurs concerning what could go wrong with the start up. This instrument is built on the three main constructs a) negative entrepreneurial knowledge, b) fear to fail, and c) entrepreneurial responsibility. This instrument will be validated with respect to *the competence* to react firmly and clearly in adverse entrepreneurial situations (five-step-algorithm for rescue actions). By regression analysis we will find out which part influences most the respective competence quality. In a final step we would like to change students’ (entrepreneurs’) SoF in order to enhance the probability to survive in critical founding moments.



In this paper we refer to the second part of our research plan: We would like to use the interview material for a first validation of our total construct. We just ask if there is something like SoF and the competence REF using statements of failed entrepreneurs. On a first view this is a simple check, but it is a necessary step in order to be able to defend the both the preconditional construct SoF and the competence REF. With other words, we try to find examples of each hypothesized dimension of SoF and examples for each step in the action algorithm.

### **Competence orientation**

Oser & Volery (2014) have formulated 50 start-up competences for young entrepreneurs. These are topics like to have the capability to develop a business-plan for the own firm, or to produce a business rational with a market competition analysis etc. Some of the competences deal with the ability to react in critical situations. But in general, the concept of avoidance of loss, the faculty of being aware of weaknesses in the firm and the use of fast heuristics to settle dangers and to develop a safety concept for bridging the firm over the valleys of dangers are not there. That is why we work on what we call a special competence profile, namely to deal with the loss of control when a firm begins to shaken. We call this competence profile - as already said - "REF" (competence to rescue an enterprise from failure) which is strongly influence by the concept SoF. Knowing that a large knowledge base doesn't necessarily correlate with high-level performance (Gruber & Mohe, 2012) and that for any competence realization people need "to-be-applied" knowledge (Gruber & Mohe, 2012, p. 77), we consider REF as a chain of connected single competences, a kind of competence profile.

Why do we think that the construct SoF influences the capability to act professionally? What is the idea of defining the competence itself as a chain of abilities?

Since Shulmans' seminal work (1987, 2004) educational psychology turned into what is called a strong competence orientation. But Shulman is not a competence psychologist; he did research with teachers, physicians, layers, clerks, engineers. This is why he rather relies on different forms of knowledge (content knowledge, CK; pedagogical content knowledge, PCK; pedagogical knowledge; PK, developmental knowledge, DK) making clear that he assumes competences of teachers as a result of those elements. But professional competences are more than a composition of knowledge, they are dispositions for doing professionally necessary and expert oriented work. That is why later Shulman speaks on the wisdom of practice and the so called signature pedagogy, a holistic form of professional doing. Popular definitions of competence, however, sometimes include many psychological and personality oriented elements. Here an example: "Competencies are the positive combination of knowledge, ability and willingness in the availability of the individual to cope successfully and responsibly with changing situations" (Weinert, 2001, p. 27). In this definition "to cope successfully" is the core element, and typically for such definitions it is not of high plasticity. We suggest that professional acting must become a face, must be named, modeled and measured more precisely (see also Frey, 2008).

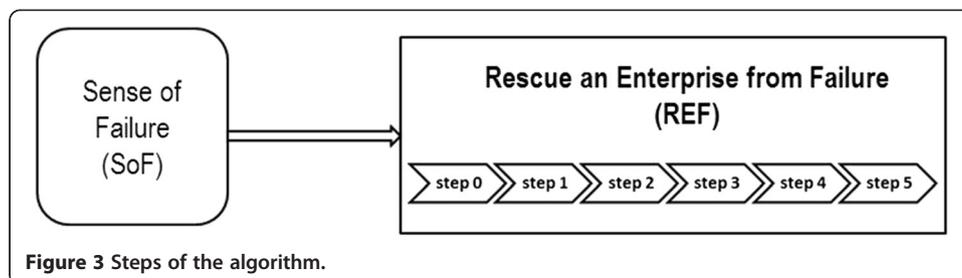
But the elusive character of the concept of competence is often ignored. Competences are rather necessary action dispositions that can be transformed into performances if the action is seen as professionally necessary (see Ascot, 2012; KoKoHs, 2014). Professional competences are highly domain-specific. Because they are defined through the profession

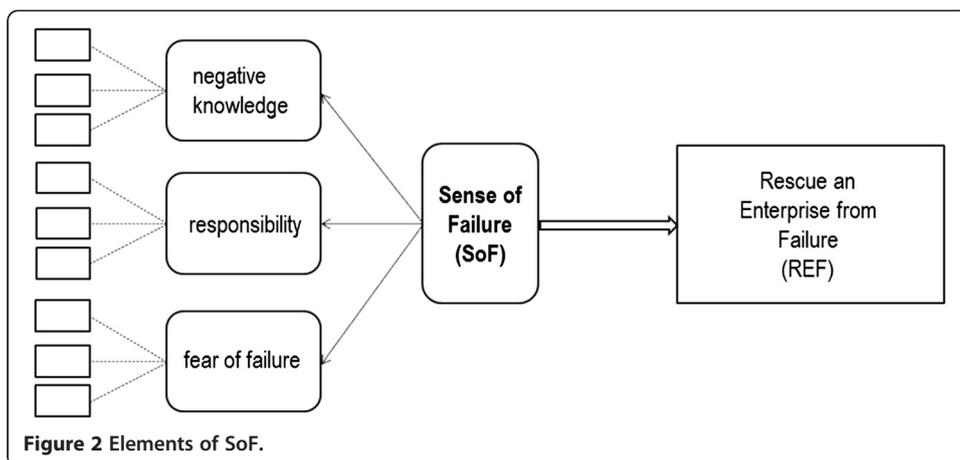
itself they must be named as such. If a psychologist analyses a phobia of a client, it is a different competence than a teacher organizing group work or a manager producing a business plan for the next financial period. If it is said that competences are accompanied by the feeling of duty (accountability) and motivational elements (Weinert, 1999, p. 25), it must be realized that these elements are not part of them: It is possible that someone is highly competent but not motivated to act. To give an example: To make a surgery for cutting out a bazillion from the skin is only feasible if the clinical findings are unambiguous; but then only a skilled doctor can do what shall be done. Therefore, we suggest a source model (SoF) for the competence (REF) itself. We propose that it is necessary to distinguish between the competence (an observable, describable and feasible act) itself and influencing variables or concepts.

As SoF focuses on adverse situations in start-up process from entrepreneurs it can be seen as a concept/construct that influences the ability to recognize the moment when problems appear and the ability to react appropriately in such adverse situation. Hence, SoF can be seen as a precondition for a professional entrepreneurial competence (REF).

For it, we posit five central elements that help to understand what we mean by SoF, REF and its relation:

- First, a competence is always a part of a chain of competences of a competence profile, and not a single competence in itself. A competence profile is determined by a situation in which a couple of single actions are clustered by the necessity of solving the respective task. To land an airplane is one clear cut situation with a lot of chained and connected actions, all together representing the competence profile, namely to land under simple or complex conditions. REF is a competence profile.
- Second, with respect to SoF, we try to model and measure it. On the basis of the threefold theoretical construct presented by Oser & Volery (2012) the aspects influencing the competence profile are outlined (see Figure 2).
- Third, we need both, especially the formulation of the competence itself and afterwards also the knowledge, which are sensitive to it. With other words we do not infer from knowledge to competence; but we rely one to the other (see Figure 3). In addition we need motivational components that can be derived from the expectation theory, the causality theories, the self-regulation theories or the regulatory focus theory.
- Fourth, we accept the fact that being in the possession a competence profile means to be able to act not only in a “normal way” but also in difficult situations (in surprising, unexpected conditions).
- Fifth and finally, we belief that motivational and emotional aspects should be considered but according to Reynolds and Curtin (2008, p. 155) who posit that for





entrepreneurial processes “personal attributes, motivations, and contexts seem to have minimal effect”, we do not suggest motivation as a part of the competence itself, but as a spate concept stimulating the respective competence profile.

All of these criteria are related to REF. Thus, REF is most clearly described with the following analogy: An airplane captain must know how to start and land an airplane. He/she is in full possession of a couple of action possibilities that - in a normal case - lead to a successful target achievement. Some of these actions are related to checklists. Others are complex and situation specific, but still of regular activation. Lets say that a huge storm is coming up and the pilot cannot anymore escape the situation. What he/she is doing now are much more seldom activities, related to risks and heuristics. E. g. being in contact with the control center he/she maybe must guide the plane in a much lower position, to overcome the shaking and the danger of loosing control. The mentioned checklist is there, but normally time is not available, and a quick reaction on the basis of an immediate situation analysis and fast heuristics are necessary. For the passengers it is of highest importance that the captain has a full developed SoF and REF. He/she must remember similar cases, must check fast reaction consequences, must risk a turn which is difficult in a storm, must order all the security measures, must stay in contact with tower asking for permission to escape.

Of course an analogy is never perfect, but REF is a similar competence profile for struggling start-ups. We need it, and we have to teach and develop it for the good of many young firm.

### Elements of “Sense of Failure”

As Kahneman (2011) stresses, the negativity (negative events, mistakes, failure) is always stronger than the positivity. Thus, it is interesting that in the most entrepreneurial courses and investigations the concept of success is prevalent, but in fact elements for surviving and overcoming crises are seldom. We think this should be reversed. SoF should be modelled and measured as a preconditional concept for a competence to interrupt the flow of work and to intervene in a purposeful way to rescue an enterprise.

Its elements are (a) entrepreneurial negative knowledge, (b) entrepreneurial responsibility and (c) entrepreneurial fear of failure (see Figure 2).

Ad (a): Related to failing in entrepreneurial context, we refer to the theory of “learning from mistakes” and to the so called “negative knowledge” (Gartmeier et al. 2008; Oser & Spychiger, 2005). Knowledge determines individuals’ perception and appreciation of the circumstances and processes in their environment. Negative knowledge can be seen as the same representation with inverted sign. The various elements of the knowledge structure are semantically complementary. According to Oser and Spychiger (2005, p.26) negative knowledge is knowledge about:

- what is wrong,
- how something does not work,
- which strategies are not constructive and
- which concepts and theories are not right.

Negative knowledge in SoF provides a protective power and should give confidence and security in critical situations during the coming phases of the start-up process (see Oser & Spychiger, 2005, p.31ff). In addition, we consider negative knowledge being a factor for action regulation. Thus, negative knowledge includes individuals’ own experiences of failure (negative episodic knowledge), failure experiences from others (advocatory negative knowledge) and acquired factual knowledge concerning entrepreneurial situations in which mistakes may occur (Cope, 2011; Baumard & Starbuck, 2005).

Ad (b): The second variable of SoF refers to the psychological characteristics of responsibility and includes care and justice concern. If someone is responsible he/she can put him/herself in the shoes of the ones who are part of an enterprise; he/she is accountable with respect to these other persons. Embedded in any responsibility concept is the not risky decision making with respect to financial transactions. We suggest that responsibility has a motivational effect on acting in adverse entrepreneurial situations.

Ad (c): The third variable is entrepreneurial fear of failure, “an essential part of entrepreneurial journey” (Cacciotti & Hayton, 2014, p.44). Due to the protective function of fear, it is an important driver for entrepreneurial rescue actions. According to Lazarus’ (1991) cognitive-motivational-relational theory of emotion the evaluation of a situation on the one hand and the individual perceived degree of coping with this situation on the other hand are relevant for acting. We think having a middle level of fear of failure inhibits loss of control and effects that lead to one of the named ten forms of failure (see paragraph “counter indication”).

### **The competence to “Rescue an Enterprise from Failure” (REF)**

In the situation of a stormy and shaking enterprise every responsible leader must act like doctors in an emergency room. This acting refers to a certain cluster of competences called REF. To operationalize REF it is essential to develop tasks with self-organizational character (see Erpenbeck & Rosenstiel, 2003). It is also important to avoid measuring either only knowledge or automated (professional) practices such as skills or routines (see Grob & Maag Merki, 2001). According to Erpenbeck and Sauter (2013), Shavelson (2011) and Erpenbeck and Rosenstiel (2003), we consider competence being a capability, that means a disposition to act in complex, dynamic and unpredictable situations on basis of self-organization. Disposition means that someone is able to act, is able to interpret the

necessity to act, but decides whether to act or not to act. Underlying this process is the self-organizing human being.

But - again - how can we operationalize REF? What is the critical frame of REF? Is it possible to model this act through an algorithm on a medium generalizable level that represents the competence profile REF. The concept is new. In a first step we propose the following chain of action elements which is subtle enough to be applied to any possible entrepreneurial failure situation (see Figure 3).

- (0) The step zero is a form becoming aware that “the ship is rolling”.
- (1) In a first step the flow of work has to be interrupted and the team must come together.
- (2) The second step has to do with weighting the issue; one must become sure that the case is serious enough and that important steps have to be undertaken.
- (3) The third step concerns the analysis of the situation; checks up and causalities have to be explored including hypotheses about the remedial action, heuristics and plans.
- (4) The fourth step is action realization.
- (5) The fifth step is an evaluation if the intervention worked out, how it worked and why it worked. It concerns the positive or negative consequences of the intervention. Either it leads to continuation of the work, or to go bag and to start the step 2 again.

Even if these five steps are related to action theories, it is necessary to reflect on their status.

- With respect to concrete situations not all the steps have the same importance. Sometimes step 2 is most important, sometimes step 5 etc.
- The length of a phase or step is variable according to adaptation to the situation
- The steps can be quasi integrated in one to each other step; for example step 1 may be a short attend to the crisis, but goes immediately into step 2.
- It is possible that, within the range of steps, there is a circular variation. Thus, for example step 4 and 5 may be in a back and forth manner related to each other.
- The circularity may have a different form, namely that all steps are repeated many times, or steps 4 to 6 are repeated in a circular way.
- Human actions are characterized by goal-oriented consciousness and controllability to ensure behavioral change during acting (Greve, 2002). Entrepreneurial actions in critical situations are seen as goal-oriented actions. This means that the capacity to restore consciousness and controllability is central. Interestingly the aforementioned process and its several phases are in accordance with stages/phases of action theories (Hacker, 2003), problem solving theories (Dörner, 1992, Schaub & Reimann, 1999) considering the aspect of decision making (Hacker & Weth, 2012).
- There are different influences from the SoF of the five-step competence. If, for example, someone knows about the sunk cost effect (negative knowledge) he/she will differently react as if this knowledge is not available.

The inner life of these phases or steps has of course to be critically analyzed.

### **Counter indication: what means lack of SoF and REF**

To understand what we mean by REF the reversal of a successful start-up shall be reflected. The other side of the coin, namely not having a SoF and REF, leads to insufficiently stable firms. They can have different forms, and of course this kind of external validation leads to an understanding of how failure can be. When shaking events occur they try:

1. To just continue the daily work as if nothing happened, this with the belief that crises pass away like winds do (suppression mechanism – repression mechanism).
2. To practice high confidentiality in oneself and the own effectiveness and to believe that “we are the winners” anyhow (overconfidence bias: e.g. Salamouris, 2013; Wickham, 2006).
3. To invest more work and more money, because we cannot lose the investments executed until now (sunk-cost phenomenon: e.g. Thaler, 1991).
4. To continue even if the outcome is very small and the rentability obviously negative (living dead concept: e.g. Casas et al. 2010).
5. To accept the crash as a destiny and do not invest in special efforts for change (humble fate belief concept).
6. To block and stop the whole production process immediately without attempted rescue (explosive reaction).
7. To jump from the sinking boat without helping the involved others (lack of responsibility: e.g. Lahdesmaki, 2005).
8. To be ashamed not having seen earlier the crash coming (fear of devaluing one’s self-estimate).
9. To struggle and struggle in vain until the “titanic” sinks (over-bravery).
10. To start a new firm without finishing the process of being bankrupts (getaway effect).

Failure means one of these ten action forms. They are counterproductive entrepreneurial action options. SoF means to become aware of these possibilities (the 10 possibilities will be further described elsewhere).

### **SoF and REF: an overview**

We distinguish elements that influence regressively the competence profile, a kind of source model and the competence itself. This most powerful complex relationship is depicted in Figure 4. Here the threefold groups of dimensions in Figure 2 are seen as independent variables, having a substantial influence on the REF competence (seen here as dependent variable) respectively explaining important variance parts of it.

According to action regulatory theory “the regular mode of action regulation is knowledge based regulation” (Hacker, 2003, p. 105) and moreover actions are driven by different psychological characteristics/attributes. To see whether the elements of the Figure 4 are valid we use, for external control, material from an interview study with young successful and young failed entrepreneurs.

Again, with regard to the theoretical considerations, we assume that nascent entrepreneurs need on one the hand a set of personality variables (negative knowledge, responsibility, fear of failure) to tackle with adverse situations in entrepreneurial context resp. in start-up processes on the other hand. For measuring the action, the competence REF itself, we consider a five-step-algorithm which can be interpreted as a special form of problem solving

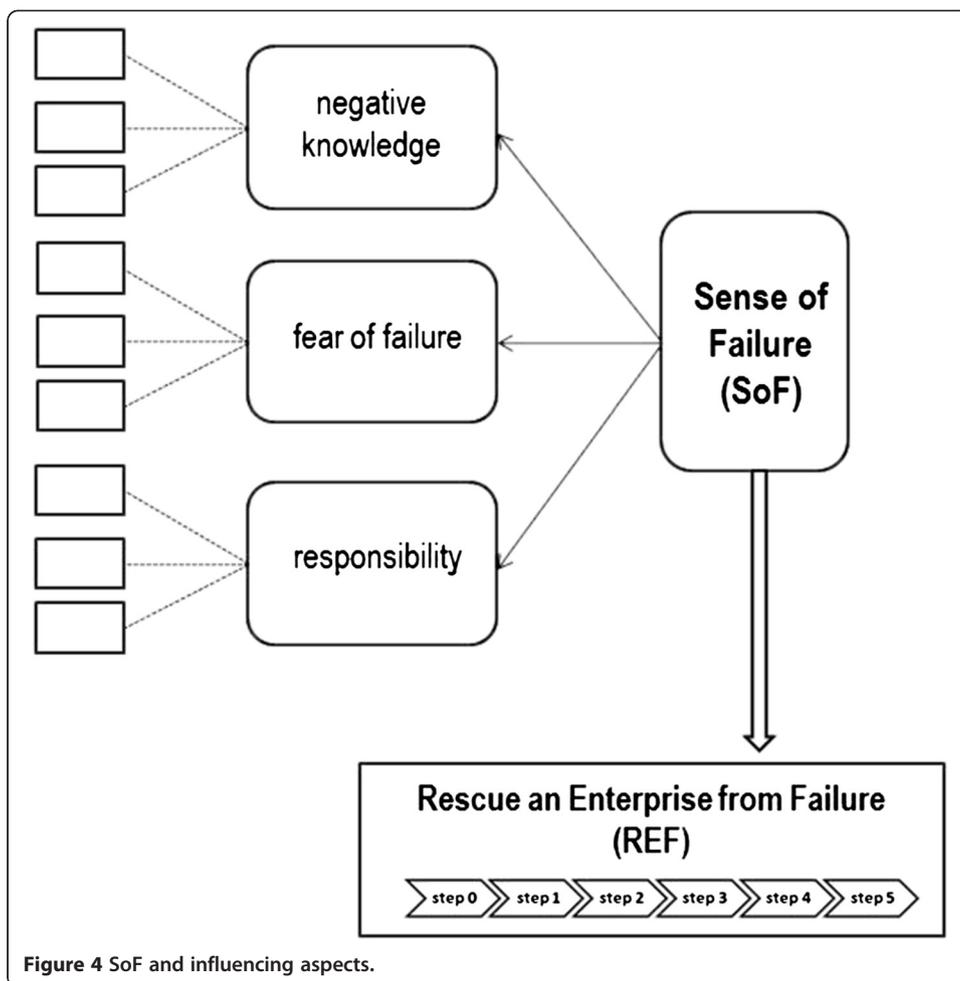


Figure 4 SoF and influencing aspects.

strategy. To summarize, we suppose that the action/the competence itself is influenced and regulated by the aforementioned variables<sup>a</sup>. For the first time, we posit to be able to shed light on the competence itself by describing an algorithm of medium level abstraction. Before constructing an adequate questionnaire to measure the competence REF, it is essential to validate the proposed concept and the algorithm.

For this reason, this study addresses the following validation questions:

- (1) Do entrepreneurs show the considered variables of SoF (negative knowledge, responsibility, fear of failure)?
- (2) Do entrepreneurs show the suggested steps of the algorithm REF?

## Methods

In a first pilot study we did explore, understand and describe the construct SoF with qualitative interview material. This material emerged from an ethnographic approach, verifying the respective phenomenon with statements of involved entrepreneurs. The whole procedure was related to an external validity design. The core of the study includes semi-structured interviews material. The target subjects were Swiss entrepreneurs, eight interviews with successful and eight with failed entrepreneurs were conducted, thus

comparing the answers of the one with the others, searching for a first answer of the question if the successful tend to have a greater amount of SoF than the failed (Volery et al. 2013). Only persons who have already founded and had an entry in the commercial register were chosen. Furthermore, a successful entrepreneur was defined by the fact, that the venture is on market longer than five years, whereas failed start-ups were characterized as such business ventures which exit the market no longer as three years ago. For each industry field (tourism/gastronomy, internet, constructionrelated, technology, IT services, trade, food) one successful and one failed entrepreneur were interviewed. The total of 16 interviews were subsequently transcribed (one person had to be excluded from the sample due to not having launched the business venture yet). Finally, seven entrepreneurs who failed and eight successful entrepreneurs were asked to describe their individual start-up process.

As an interview process and with respect to the main dimensions of the semi-structured guideline (1) all dimensions mentioned are elements of SoF and (2) a clearly structured and repeatable interview process had to be taken place. In general, the interview guideline was structured as follows: At the beginning of the interviews, the interview partners were asked to describe their individual story of the start-up in general. A half standardized interview guideline helped to be sure that the most important criteria are stimulated by the interviewer. Prompts like “Can you tell about your business and your individual start-up process? Which problems appear, what worked?” were given. The interview partners were also asked in which phases (timeline) of the start-up process problems appeared and how they coped with adverse situations. In addition, the predominant (moral) emotions were elicited, their motivations in such situations, the use of their heuristics and the solving strategies. The interview partners were also asked about the importance of knowledge in critical entrepreneurial phases. The analysis of the material was realized according to the rules of general content analysis (Mayring, 2010) using the software MAXQDA.

## **Results and discussion**

### **Examples representing SoF**

In the following paragraph we would like to present examples that represent “Sense of Failure” (Figure 2), namely (a) negative knowledge, (b) responsibility and (c) fear of failure. These examples are clues, signs or hints that the phenomenon exists, and that the field of entrepreneurship yield enough material for its own representation. Kohlberg (1981) used the picture of smoke referring to fire, and he says that if you see smoke we are not sure that there is also a fire, but there is a high probability of it. The same counts here, then as said, the examples stem from *real* situations represented in the *real* life of *real* failed and successful entrepreneurs.

### **Entrepreneurial negative knowledge related to failure**

As stated above, we suggest negative knowledge as an influencing factor for acting in critical entrepreneurial situations. With regard on the learning effect from mistakes and failures there can be differentiated between learning from own experiences of failure and failure experiences from others (advocatory negative knowledge). The following statements are examples:

## (1) Negative knowledge:

“If someone is euphoric and wants something new, he is not reflective (...) But we have to be reflective and read the contracts conscientiously (...) If you get a big business order, the client will pay only after three months. They always do so and I did not know that, I was ignorant. I did not read the contract. That was my mistake. And then I reminded them and they said that I should have read the contract in detail. Then I read the contract and recognized their option to pay three months later. And they did pay. But three months are twelve weeks, it is a long-term period (...) 40'000, 50'000 Fr. is much money which I invested in materials. I could not pay it, because I have not had the money.” (DZ, 241–265)

## (2) Advocatory negative knowledge

“They would have liked to do it, but they have not pursued their aims seriously (...) launching a business venture is spine-breaking work (...) and you have to keep close if you would like to succeed. And they wanted to make it quick. And they failed.” (BZ, 844–854).

While the first example is related to learning from own mistakes, the second passage pick out learning from experiences of others as a central theme. But both examples show that negative entrepreneurial knowledge is important. It has a strong influence of what a start up is able to support without braking the neck. It leads to act in a way that not the same mistake will be done again. It gives security, it helps to see defaults, it protects from simple stupidities.

**Entrepreneurial responsibility**

Related to responsibility we could identify two categories in our interviews:

## (1) Responsibility to society:

“Of course to the society. I cannot get out of it without debts. Although you might say the state France is the creditor, these debts are taxes which are in general related to people (...) and if you are an entrepreneur there is a certain responsibility” (CS, 825–834).

## (2) Responsibility to employees:

“Related to employees' salary I do a good job (...) first of all I assure that my employees get the money.” (DZ, 703–711).

The first example illustrates entrepreneurs' moral responsibility in general; the passage refers to responsibility towards society. The second example specifies this responsibility and focuses on the responsibility of an entrepreneur for employees. According to the interviewed entrepreneurs financial responsibility is a steering force. It makes people relational, caring and foreseeing negative consequences. Even in a utilitarian conception, responsibility is

a domain in which a decision includes the consequences for others. We found as higher responsibility claims as less change in the sense of leaving a business behind oneself.

### **Entrepreneurial fear of failure**

In general we distinguished positive and negative emotions (Oser & Spychider, 2005, pp.72ff). The little percentage of positive emotions is related to aspects referring to social support:

“In general I believe, I have had big support and the people who were important to me have always supported me.” (JE, 1163–1165)

The number of comments both failed and successful entrepreneurs about fear during crises or failure is predominant. The following statement serves as an example:

“Yes, the experience during my apprenticeship [in the opinion of my boss I did a lot of mistakes] influences me (...) especially my self-confidence. Sales are doing extremely well, everybody tells me (...) but it [the experience] blocks me (...) Nobody notices, but I get nervous, I have fear of failure.” (FS, 462–469)

In this statement the occurrence of fear of failure is explicit formulated. The interview partner reports about experiences in failing and the fear of failing again. In general fear of failing is a supporting stability factor, but also a negative innovation factor. Being aware that both aspects must be equilibrated we think that for start-ups the second has to be stressed. Later on – as shown – in diverse interviews – the second, the stability factor becomes prevalent.

### **Description of the steps**

One goal of the study was to detect if the aforementioned steps of REF are present in the interviews. All in all, we find examples for each of the suggested five steps of the action concept. Subsequent each step is illustrated by statements of the conducted interviews.

- (0) The following statement represents a typical case of “becoming aware” that something goes wrong, but not having the means, knowledge and power to intervene immediately. Here the phase zero of our action oriented competence system is at stake.

“On the emotional side, if we sold one of this equipment more or less, we had always this insecurity. One more the curve looked positive, one less negative or flat. Thus the impact of a booking on the sales volume and on the cash flow were enormous. We never knew if an order comes or comes not. It became very difficult, and in 2010 nothing more worked out. Before it was quite good, and we made a little benefit. But then it stopped, nothing more, and we couldn’t explain why the orders didn’t anymore come. We had (and have still) the opinion that we did nothing wrong, but things were beyond our influence” (FK, 503–518).

Another example for the step zero in our action oriented competence concept is as follows:

“I think a tendency (for a failure) was already there, and one could have discovered it, or at least earlier discovered it. In fact the problems were clearcut, but for us only now (too late) noticeable. It was a kind of waking up, or something we thought before. We were so much convinced from the idea, and we were convinced that this idea will make a way into the market, and that it will go somehow automatically. And now we had to concede, it will not be like this” (DB, 303–317).

The individuals do have an awareness of the destiny of their firm, and they know that things will become hard; but they do not know the causes, and they even deny that there were mistakes. Thus, this preconditional step is indeed different from problem solving or combinations tasks: It is accompanied with existential insecurity feelings.

(1) The following statement represents the first step in which work is interrupted and check ups and causalities have to be explored:

“We started on the one hand to become a clear picture of the situation. We asked ourselves about the conditions of a possible fruitful functioning on different levels, and also about the presumption for it. And we wanted to have transparency of the situation” (DB, 363–370)

Especially the following statement describes a clear cut, a point which requires a back-pedal:

“To that time we thought STOPP! We were in a financial crisis and we had to have the focus on liquidity, because we had no earnings. At the beginning this was a strategy issue: which strategies do we choose, which is the adequate business model to enter the market. At the beginning we consider questions belonging to strategies.” (AR, 344–351)

Above we state that the first step is connected with an interruption of the normal work flow. Indeed, this “stop” is necessary for gaining time and overview on the situation. It is maybe the hardest thing to learn because if someone goes a step back, reality hits his face in a non preserving way.

(2) The second step includes a sort of weighting the issue; one must become sure that the case is serious and that important decisions have to be undertaken:

“In any case they promised us 400'000Fr. And we thought that this is absolutely perfect (...) Later we tried to reach the person responsible for that money of the group of investors, by telephone, by mail, he did not contact us. We tried again and again to reach him, but without any feedback. And somehow he thought to contact us. And he did send us this (negative) e-mail. And we did fall in a hole, it was very hard, because we felt to be treated unfair...This was extremely decisive...we did fall in a lethargy” (JE, 497–576)

Step 2 is also illustrated by the following passage: the entrepreneur’s awareness of the problem and the awareness that something must be done become clear:

“In 2011 it was better, but did not go well. Then we decided to reduce the team (...) here, in 2010, we slipped into red. This characterizes the cash-flow. We made big losses and therefore the cash-flow came to zero (...) In 2012 things still went well, but we had orders. Nonetheless we knew that the firm is a living death.” (FK, 546–559)

As described above, in step 2 the protagonists are asking themselves or others about the importance of the information getting from step 1. This importance is related to fear, further risk taking and trust in advance.

(3) The following statements are examples for the third step which includes hypotheses about the remedial action and about heuristics.

“Until that time, the financial support of family and friends was enough. But it was clear that our family and friends are not able to support us financially in that intensity which was necessary to survive. Therefore we decided to search for investors, but we wanted to solve it neither through private equity or venture capitalists nor we wanted to sell the shares. We wanted to make it through business angels, persons who engage themselves, also in an emotional way.” (DB, 396–410)

“(...) and I always claimed that we, as a small enterprise, cannot build a distribution network in all the industry sectors and countries of our customers. Especially, these are old industrialized countries and ambitious areas, we are not able to do this. If we would like to do it, we would have to invest millions (...) At the beginning we wanted to try commercial alliances with distribution partners (...). Finally, we admitted that we do not want this risk (...) and had the idea to sell the product to an enterprise which has know-how related to distributional aspects.” (FK, 636–666)

These statements illustrate the step of findings heuristics based on the antecedent steps 0 to 2 *and* on intuition and spontaneous help searching. Different ways of solving the problem are considered, pros and cons of each strategy are considered due to the individual goals.

(4) The fourth step represents the action realization and is represented by the following passages:

“Such a turning point was the discussion with J.F [president of the governing board with high experience as CEO of the Airport Zürich]. We had already a good network for the search of investors. But J.F. opened us up many contacts, and we had about 30 face-to-face encounters with A-level personalities.” (DB, 457–460)

“Actually, before the liquidation I invested two month to settle the outstanding bills in order to avoid a bigger crash and to limit the damage. ” (CS, 734–738)

In this statement we detect immediately how important an action is, even if it is based only on heuristics. This is characteristic for this step: Try it out, do something, don't let things go. It is an action cluster that is based on knowledge of steps 0–3 *and* on intuition and spontaneous help searching.

(5) The last step in our algorithm is the evaluation of the action itself. The following passage presents an example:

“And then it worked, how can I explain it: this strategy gave new opportunities (...) we recognized that our sales has doubled from year to year and such developments give self-confidence (...) we became more efficient, we gained more know-how, and we knew which elements must be adapted for continuing this positive development.” (DB, 552–571)

“We could demonstrate that the technology works. In a next step we have to scale. Scaling not related to technology, but related to business (...) But this business-scaling did not work. We did not manage it. In the end, this was the point we recognize that it does not work today. Maybe the next year or in two years, but today it does not work.” (AR, 152–164)

This last step is important with respect to the decision: yes we keep the enterprise or no we fail. Interestingly failed entrepreneurs' talk more about this last step, as Kahneman (2011) states negativity is biologically and cognitively stronger than positivity.

## Conclusion

This article's aim is to elucidate the construct “Sense of Failure” and the competence to “Rescue an Enterprise from Failure”. Sources for this profile are negative knowledge, responsibility and fear of failure on one hand, on the other we claim that any act for saving a struggling young enterprise consists of a kind of generalizable five step algorithm, a disposition in order to resist the negative failure event.

Our first attempt in this project is – and this was the main goal of this paper – to validate the proposed elements with qualitative interview material. For each element of the proposed dimension we looked at the interview material, searching for prototypic examples (content analysis). The goal was to answer the epistemic question if the elements do appear spontaneously. If we did so we can only foreshadow that externally seen there is a probability that a scale which we will develop later have an existential fundament. The chosen material is of course not randomly assigned. Consequently, we just looked at the meaning within a situation and the importance the subject yield to it. Although we could delineate each proposed step of the suggested algorithm from the conducted interviews, the generalizability of the relationship between the construct resp. the example is not given.

The next steps in our research process will be (1) the development of instruments to measure the different variables of SoF and (2) to search for a possible method to measure REF.

## Endnotes

<sup>a</sup>Additionally, we want to measure entrepreneurs' motivation, overconfidence and self-efficacy. Evenhough we do not see this variables as constitutional elements of SoF, in accordance to action theories (Hacker, 2003; Schaub & Reimann, 1999; Dörner,

1992) and concepts of the construct competence (Erpenbeck & Sauter, 2013; Weinert, 2001; Wollersheim, 1993; Roth, 1971) we suggest these elements as factors which influence the competence REF. Hence, we plan to measure variables which refer to special effects of entrepreneurial challenges, namely a) entrepreneurial promotion and prevention motivation, b) entrepreneurial self-efficacy, and c) entrepreneurial overconfidence. Due to its “motivational and self-regulatory relevance for future acting” (Grob & Maag Merki, 2001, p. 102) we consider self-efficacy as a fundamental influencing factor. As we suggest motivation being an independent condition for competence-based performance (see also Weinert, 1999; Schneckenberg, 2008; Reynolds & Curtin, 2008), we posit that entrepreneurial motivation is a powerfully influencing element for REF. We also suppose that entrepreneurial overconfidence, an excess of self-confidence (Wickham, 2006; Aulich, 2010) is impacting for REF.

#### Competing interests

The authors declare that they have no competing interests.

#### Authors' contributions

Both authors read and approved the final manuscript.

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